OCTOBER 10, 1922

THE RUBBER AGE

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THE
RUBBER AGE

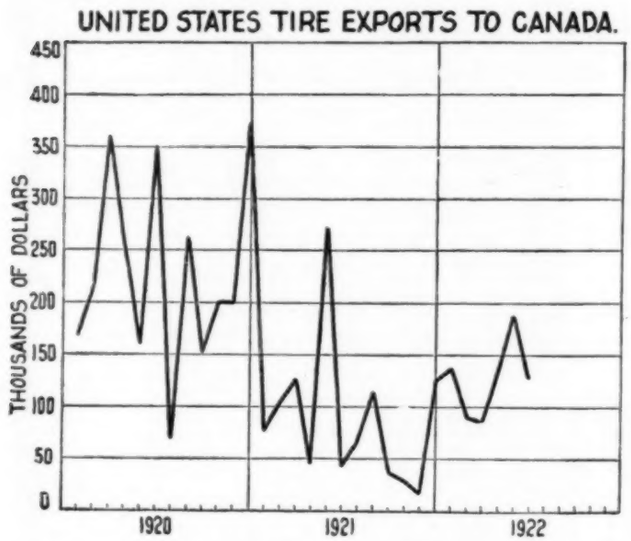
VOL. XII. OCTOBER 10, 1922 No. 1

The Trend of American Tire Markets

A Comprehensive Survey of the Export Field for the Fiscal Years 1920-21 and 1921-22, Illustrated by Fifteen Graphic Charts

Prepared by the Rubber Division, United States Department of Commerce

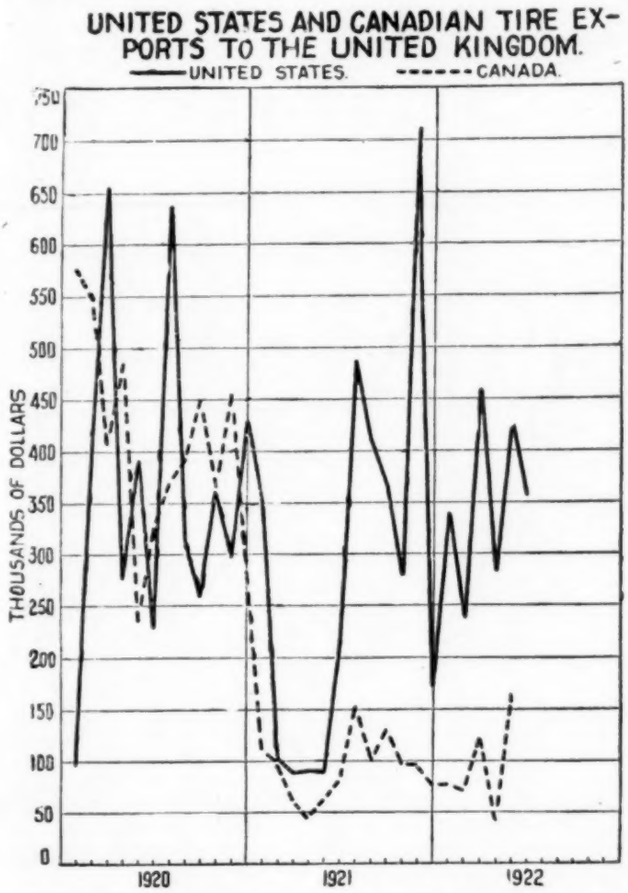
THE United Kingdom, with its 463,000 cars and trucks, is today not only the largest foreign user of American tires, but as an American tire market presents a very encouraging outlook. From an examination of the accompanying chart it will be seen that the value of the United Kingdom's tire imports from the United States during the 12 months ended June 30, 1922, was almost equal to the imports for the peak year of 1920. As tire prices are now about one-half of what they were in 1920, it is evident that nearly twice the number of tires have been shipped from this country to the United Kingdom during the past 12 months, as compared with 1920. Only for a short time in the early part of 1921 was a reaction in British tire buying evident.



Possibly some of England's large purchases are ultimately transshipped to other countries on the Continent, though it is probable that this portion is not relatively important. In any event, the same possibility would have existed in 1920, so that the comparison is a fair one and indicates unmistakably the present healthy trend of the British market for the sale of American tires.

Importance of Canadian Market

One would not suppose that Canada would buy many tires made in the United States, principally because of the very strong local tire industry, the high protective tariff, and the past depression in Canadian exchange. However, the United States actually ships large quantities of tires to Canada every month. Canada's 463,000 cars and trucks are a relatively large number as compared with almost any other foreign market. It is believed that present production costs in the United States are lower than in Canada (a fact which would tend to encourage shipments from this side), while the value of the Canadian dollar has steadily appreciated, thus overcoming the former effective exchange barrier to American tire trade with Canada.



An examination of England's tire purchases from Canada will reveal quite a different condition. They were very large in 1920, but have declined to a relatively low level since early in 1921. It is probable that a lower cost of production in the United States, as compared with Canada, is the reason for this condition.

The Canadian tire market is at present worthy of serious attention, and effort expended there may prove profitable.

The French Tire Market

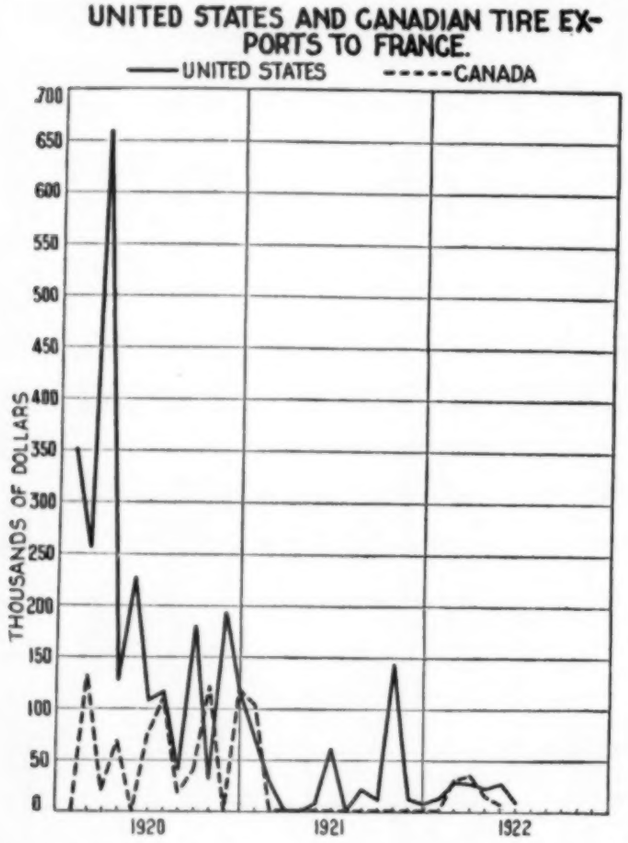
By means of a high tariff and exacting import restrictions, France is strenuously endeavoring to reestablish and maintain a more favorable trade balance and build up its home industries. In spite of its 235,000 cars and trucks, France will not likely prove to be an attractive market for American-made tires for several years.

The tariff preference accorded to Canadian-made tires may seem to offer a solution to those American concerns operating factories in Canada, though it is possible that the difference between American and Canadian costs would completely offset this advantage. Some American-made tires will no doubt continue to be sold in France, though the effort could be better spent elsewhere.

It is probable that the French restrictions on tire imports will ultimately cause the establishment of additional branch factories in France by foreign firms committed to an aggressive foreign-trade policy.

Market in Germany

Although Germany is listed as having some 91,000 cars and trucks, it can not be regarded as a possibilty for the sale of American-made tires. This is because of the rigid import re-

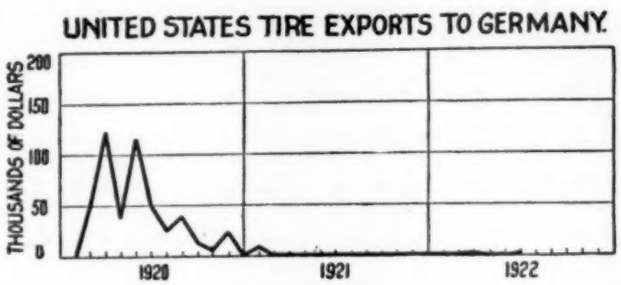


strictions imposed in a frantic effort to establish a favorable trade balance and the present demoralized German exchange, as well as the uncertain social and political conditions, which can not be expected to clear up for some time. These same conditions are not only fundamentally opposed to the importation of foreign-made tires into Germany, but preclude the possibility of entering the German market through the medium of branch factories established in that country.

Difficulties in Selling to Australia

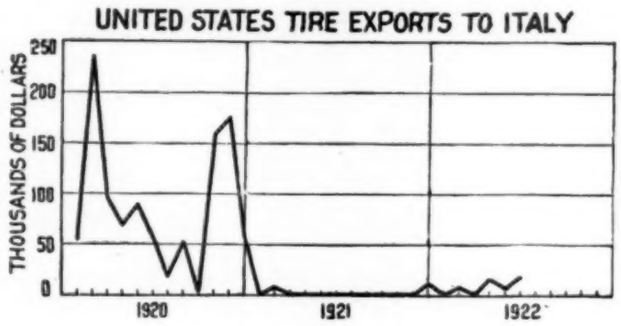
Australia, with its 85,000 cars and trucks, has always seemed to offer attractive possibilities for the sale of American tires, but many markets much smaller than it have taken larger volumes.

The secret is that Australia is definitely opposed to the importation of foreign-made tires. It is that country's desire to build up an adequate home industry through protection accorded by means of a high tariff. This purpose is so pronounced, it is believed, that even if American tires should be able to compete to a large extent and for any great length of time, the Australian Government would find some means of overcoming such opposition.



Australia's distance from the tire-manufacturing countries, as well as its nearness to the sources of raw materials, renders its tire industry unusually secure. On the other hand, Australia's rubber factories will never be called upon to turn out the volume, nor will they probably ever be able to equal the quality or cost of production of American firms.

As Australia's resources have scarcely been tapped and its people are progressive and energetic and enjoy a very comfortable standard of living, it is practically certain that the



Australian motor-car market will expand with great rapidity in future years, and that among certain classes, American tires will always be preferred because of their quality, in spite of their price.

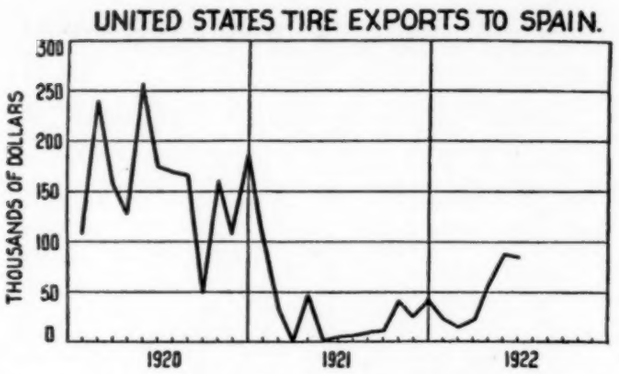
As the Australian motor-car market develops, local branch factories will come more and more to be a subject for careful investigation by those American firms committed to an aggressive foreign program.

Depression in Italian Market

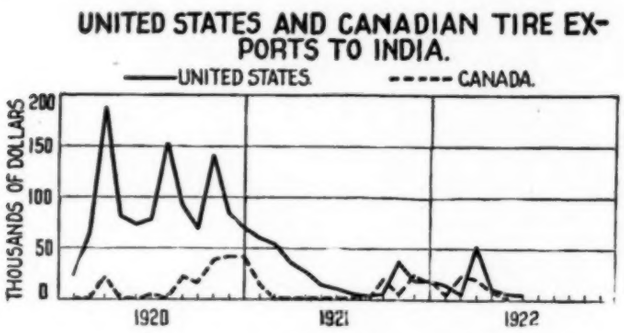
The surprising thing about the Italian market is that it should have shown even the slight activity in the purchase

of American tires that has been noticeable since December, 1921.

The high motor taxes which have prevailed in Italy have naturally tended to discourage normal activity in the motor-

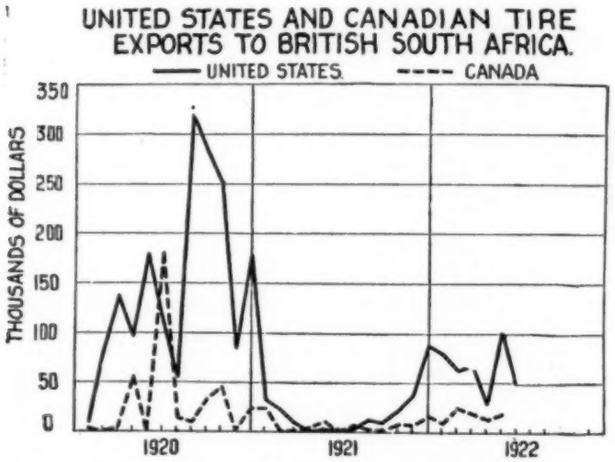


car and tire markets. Furthermore, not only does Italy's depreciated exchange militate against the importation of American tires at present, but the local Italian rubber industry has apparently demonstrated its ability to supply the market satisfactorily. Until Italy's exchange situation improves and the country gets back on a more satisfactory



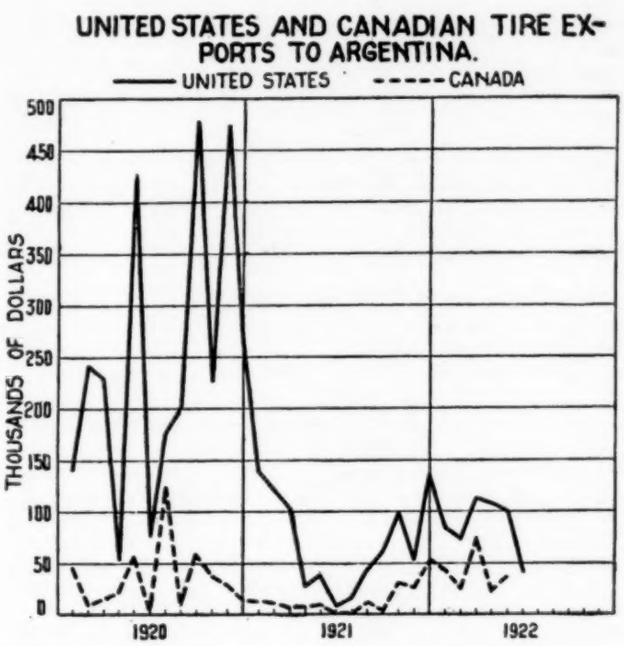
economic basis, the Italian tire market is not likely to prove very attractive to American tire concerns, in spite of Italy's 54,000 cars and trucks.

The present demand for automobile tires and its extension in the near future are limited by the following factors: The depression of the lira not only serves to hinder the importation

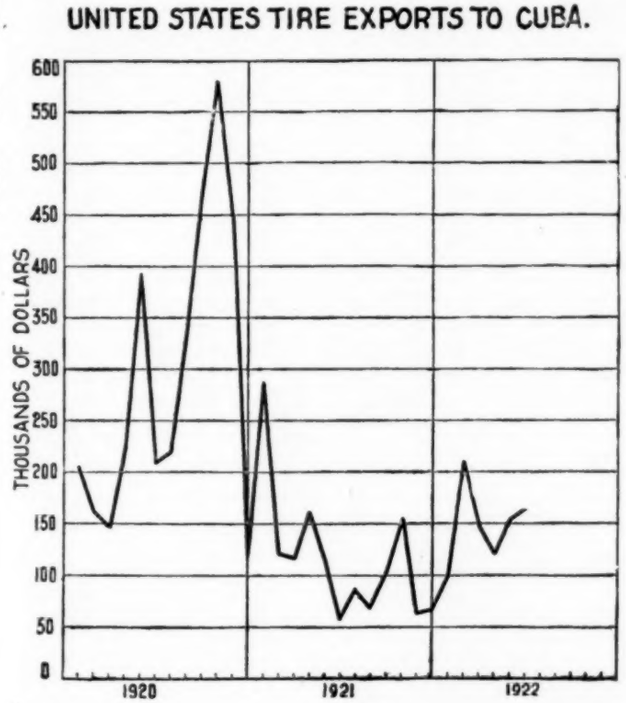


of foreign cars, unless they are afterward sold at lira prices so high as to place them beyond the reach of most Italian purchasers, but it also serves to keep the price of Italian-made cars at high levels; no large measure of prosperity is enjoyed by the middle class, which in other countries would naturally provide the bulk of customers for automobiles; the price of gasoline, varying closely with the premium on dollar exchange, makes the operation of an automobile rather costly; the heavy motor-horse-power taxes (although in 1922 they are much lower.)

The Michelin Co. is declared by a number of persons acquainted with conditions to be the absolute dictator of prices.



It is said that all sellers in the Italian tire trade must conform to the quotations set by that company. However, other authorities state that Pirelli & Co. also has a voice in fixing the price at which tires are sold, but even those who attribute some power of this sort to Pirelli agree that Michelin is most



powerful in this regard. Pirelli & Co. gives larger discounts to dealers and is also reported to give an inner tube to each purchaser of a tire.

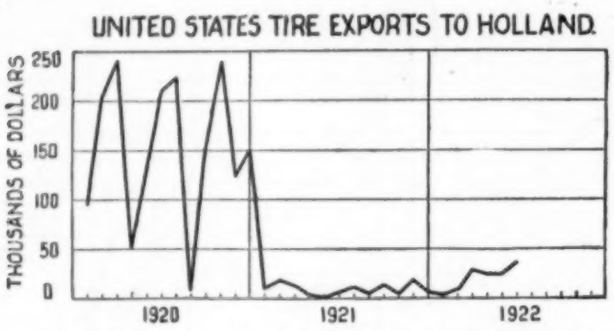
The dictation of prices on the part of the Michelin Co. applies only to list quotations. On actual sales discounts vary. Michelin and American agents, who have an established trade, give little credit or, at the most, 30 days. Pirelli and Dunlop,

on the other hand, can be persuaded to give as much as three months.

Tire-Repair Outfits—Market for Bicycle and Carriage Tires

There is little knowledge in Italy of such quick tire-repair outfits as are widely sold in the United States. One American exporter has lately made a start in sending his tire patches to Italy. Most Italian automobile owners are said to be inconceivably careless in the attention paid to the upkeep of their tires. When they decide to have their tires repaired they usually send them to shops where vulcanizing processes are employed.

Pirelli and Dunlop appear to hold the Italian field in the sale of bicycle tires. The wired-in tire is universally used here as elsewhere in Europe. The American beaded tire is hardly known and would probably not be well received. The wired-in tire used in Italy, selling for 12 or 15 lire, is of a very cheap



grade. It is thought that a better quality of wired-in tire can be sold here for about 20 lire (1 lira = $0.0459 at present exchange.)

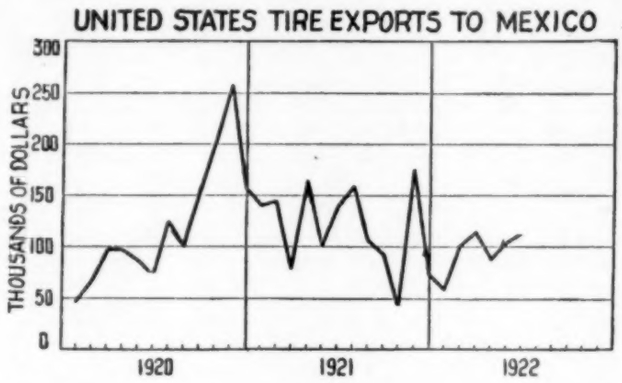
Solid tires are sold mostly by Pirelli, Hutchinson (considered the best on the local market), Martiny, and Dunlop. Motor-cycle tires are sold for the most part by Dunlop. Carriage tires are almost entirely furnished by Kelly (English).

Argentine Market for American Tires

Argentina, with its 85,000 cars and trucks (a number which is rapidly increasing), should be predominantly an American tire market. There is no local tire industry of any consequence, and no tariff preference is accorded other nations competing for the tire trade. The market is about equally distant from both Europe and the United States, and American cars and tires became firmly established there during and after the war.

It is now generally believed that Argentina's commercial and economic affairs are well past the low point of the recent depression. Manufacturing countries are again beginning to buy Argentina's basic products, while excess stocks are gradually disappearing. This resumption in Argentina's exports is being translated into an increase in manufactured imports, which should indicate better times for the tire business.

It is, however, to be expected that European companies, notably in France and Italy, and possibly later in Germany, will make a most determined effort to wrest control of the market away from the American companies, and that to a certain extent they will be successful in securing a larger portion of Argentina's tire business than they now have. Temporarily the exchange situation will give certain European countries an advantage over the United States, but

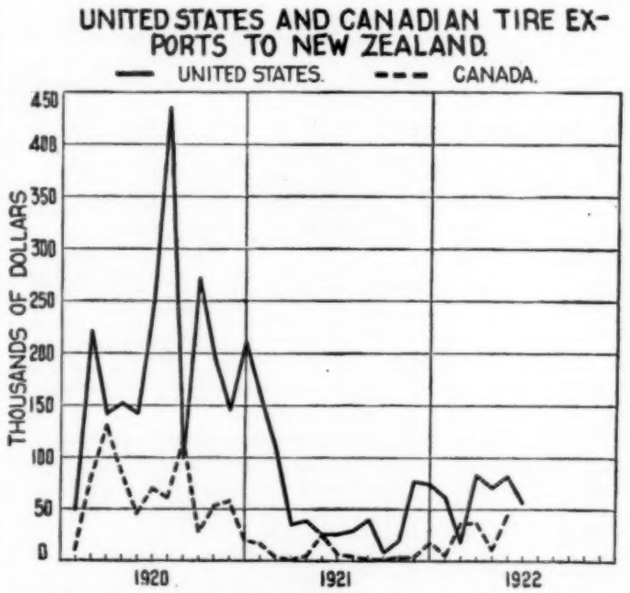


Argentina is a market well worthy the most strenuous efforts to hold.

Directly contrary to Argentina's renewed buying activities in the United States is the rather pronounced decline in its tire imports from this country during April, May, and June.

Tire Market in India

Since September, 1921, India has shown some inclination to buy American tires, purchases being divided almost equally between the United States and Canada. However, the recent increase in the Indian tariff and the uncertain political conditions have combined to discourage any very pronounced activity in the Indian tire business. While present possibilities arising from the demands of India's 46,000 car and truck owners are amply sufficient to warrant continued close



attention. The Indian market is one which may best be handled by a conservative policy as regards investments and expenditures.

Preference for American Tires in New Zealand

New Zealand has always bought more tires from the United States than from any other country and has been consistently a better American tire customer than Australia. New Zealand has 37,500 cars and trucks, or approximately 1 car or truck

to every 31 inhabitants, whereas Australia has only 1 for every 64 people.

There is no local rubber industry in New Zealand to require the protection of a high tariff, as is true in Australia, although the recent New Zealand tariff does provide for a duty of 25 per cent on motor tires and accords a preference of 15 per cent to Great Britain and certain of its dominions, not, however, including Australia at present. The effect of this tariff preference will undoubtedly be to strengthen the position of British and Canadian firms in the New Zealand market, while negotiations now pending will likely result in extending the same preference to Australia.

Australian rubber manufacturers are already making telling inroads on the New Zealand market, ranking second only to the United States in importance. Following Australia come France, the United Kingdom, Canada, and Italy. As a tariff preference is accorded to Canada, it is possible that those American firms having factories in Canada will continue to enjoy a very attractive volume business in New Zealand, though if it is true that American factories can produce at lower costs than Canadian factories, there may still be considerable hope for those companies operating factories only in the United States.

In spite of the tariff preferential against the United States, it is believed that New Zealand will continue to be an important American tire market and that sales effort expended there will prove consistently profitable.

Tire Market in Cuba

The accompanying chart shows the importance of Cuba as an American tire market. While passing through a very critical economic period throughout 1921, Cuba's tire purchases from the United States averaged well over $100,000 per month and have shown an encouraging increase for the first half of the present year.

It is generally conceded that economic conditions in Cuba are now well past the low point and that succeeding months should witness a gradual improvement.

Cuba is not a market where foreign tire competition can figure to any great extent because of the decided tariff preference accorded the United States, amounting to a 20 per cent reduction from the regular duty, and because of Cuba's proximity to this country. With some 32,000 cars and trucks, Cuba begins to present a brighter outlook for the sale of American tires.

The Market in British South Africa

Beginning with August, 1921, British South Africa has steadily increased its purchases of American-made tires. During the first half of the present year these purchases have amounted to about $394,000, averaging close to $66,000 per month. Continuing at this rate South Africa's tire imports from the United States should total $792,000 during 1922, or about three times as much as they were in 1921.

In 1920 the United States supplied 41 per cent of South Africa's tire imports, whereas in 1921 this country's share amounted to only 16 per cent, England furnishing 37 per cent and France 28 per cent. While it is to be expected that America's share of the South African tire business will gradually increase over the 1921 proportion, there is little chance that for some years it will equal that for 1920.

South Africa grants a tariff preferential of 3 per cent to Great Britain and reciprocating British dominions, including Canada. This condition assists to some extent in strengthening England's already secure position there, but gives an equal advantage to American concerns operating Canadian factories. At the same time the depreciated exchange applying to France will for a time give that country an advantage.

On the other hand, American products are well established and generally well liked throughout South Africa. The absence of a local industry of any consequence makes it necessary for South Africa to look beyond its borders for the tires it uses, while the tremendous volume of tire production in the United States should ultimately give this country a sufficient cost differential over all other tire-producing countries to enable it easily to meet most competitive conditions to be found in the South African market. With 32,000 cars and trucks South Africa should prove to be one of America's best tire customers.

French Domination of Spanish Tire Market

The outstanding characteristic of the Spanish tire market of today is France's reconquest of the position of dominance. In 1918 France sold 83,000 kilos of tires to Spain, as compared with 6,000 kilos supplied by the United States. In 1919 this ratio was 261,000 kilos to 236,000 kilos, in France's favor, but in 1920 the tables were reversed, the United States supplying 676,000 kilos, while France followed with 470,000 kilos. In 1921, however, France's share was 276,000 kilos, while the United States supplied only 179,000 kilos.

It is significant that France was able to regain first place during 1921 while paying higher tariff charges than the United States. Now that the recent Franco-Spanish treaty accords new low rates to France, though they apply equally to American tire companies, it is certain that the French position will be still further strengthened. Not only has France's tariff handicap been overcome but France still enjoys two distinct advantages—proximity to the Spanish market (an advantage which it will, of course, always have) and favorable exchange, which will, at least temporarily, place that country in a strong competitive position.

Possibly the one thing that contributed more than anything else toward France regaining its former position of dominance in 1921 was the introduction by Michelin of a successful millimeter clincher cord tire, whereas American manufacturers generally had cord tires to offer only in the straight-side inch sizes, which as yet are not nearly so generally used in Spain as the millimeter clincher sizes.

In view of all these things it is certain that if American tire companies can hold their own in Spain and secure at a profit a respectable share of the Spanish tire business, there should be no discouragement regarding the ability of the United States to compete in most other foreign markets.

American Millimeter Cords for Spain

Beginning with the early summer months of 1921, American tire exports to Spain have steadily shown strength. Shipments in March, April, May and June of this year had a distinct upward trend, as will be noted from the accompanying chart.

Several of the leading American tire companies are now offering high-quality and thoroughly tested millimeter clincher cords, which in every way equal (and possibly surpass in certain instances) the performance of the Michelin cord. These American clincher cords, which are the result of years of pioneering effort in the manufacture of the American cord tire in the straight-side sizes, will at least place American companies on an equal quality basis with Michelin, while the vast quantity production of American companies and the recent remarkable strides in the direction of greater efficiency and lower production costs should go a long way toward making up for France's proximity to the Spanish market and the exchange advantage it now enjoys.

While Spain's local tire industry is given a certain preference in bidding for Government business, its past history has not demonstrated its ability to handle the local market satisfactorily. For years to come it is certain that Spain's 38,000 car and truck owners must look beyond their own country for the tires they use, with France and the United States contending for the greater share of this business.

The Mexican Tire Market

At first glance it might seem surprising that Mexico should be able to take as many tires as it has from the United States during the past two and a half years, especially since it has only 25,000 cars and trucks and has been economically and politically unsettled for so long a time. In 1921 Mexico imported almost as many tires from the United States as in 1920, while during the first six months of 1922 its imports have fallen off about 20 per cent in value as compared with 1921—a decrease that is somewhat more than offset by this year's lower prices.

Despite Mexico's unsettled state of affairs, there are, of course, certain classes of people who still have the means to operate motor cars and buy tires. Their business naturally drifts to the United States, which is the only logical source of Mexico's tire supply. It is doubtful, however, whether the volume of business from this source will increase very much,

while it is certain that the number of new motor-car owners will not increase materially under present conditions.

Road development in Mexico has been at a standstill for several years, while practically all of the motor roads, formerly in a good or fair condition, have been allowed to deteriorate until they are now for the most part impassable. Maurauding bands infest the rural regions and render motoring in the country doubly dangerous and completely discourage the use of the motor car in the rural districts, where normal future expansion would be expected.

Those American tire concerns that are already strongly entrenched in Mexico will continue to enjoy a fair volume of profitable business, though a great many difficulties will be encountered by new firms attempting to enter this market for the first time. Cash on the border, or other point of exit, should be an unvarying rule.

Competition in the Netherlands

In 1919 England dominated the tire market of the Netherlands, shipping some 31,000 automobile casings to that country, as compared with 27,500 from the United States and 8,000 from France. In 1920 the United States held first place with 50,600 casings, and England came second with 14,500, while France supplied only 7,200. In 1921, however, France rose to first place with 14,300 casings, and England followed with 9,400, while the United States fell to third place with only 8,700.

The Netherlands is essentially a nation of free traders. It boasts some 20,000 cars and trucks. The people like American products, and the fact that they have not bought lavishly of American tires in 1921 and the first half of the present year is certainly not a permanent condition. The Michelin millimeter clincher cord gave France a tremendous advantage over American concerns in the Netherlands as it did in Spain and other European countries; but it is an advantage that is destined to be short lived, as American concerns are now offering complete assortments of millimeter clincher cords.

France's proximity to the Netherlands will always give it an advantage over American concerns, while the exchange difference in its favor is a decided temporary advantage. However, America's volume production, mass efficiency, and rapidly decreasing unit costs will enable it ultimately to retake some of the lost ground. While Germany has seemed to exert an influence in the market in the recent past, its final position is entirely problematical, since German manufacturing depends so much on the uncertain political future of the country.

Brazilian Rebate on Tires of Brazilian Rubber

The United States shipped nearly $2,000,000 worth of tires to Brazil in 1920 and only $227,000 worth in 1921. During the first six months of the present year, however, it has shipped nearly $250,000 worth, or at the rate of about $500,000 per year, which is more than twice the 1921 figure.

That the nearly $2,000,000 worth of American tires shipped to Brazil in 1920 represented a vast overstock, to which the market inevitably had to react during succeeding months, is evident when it is recalled that Brazil could boast of not over 20,000 to 25,000 cars and trucks, while it was at the same time importing tires from countries other than the United States to some extent.

The year 1922 should disclose, and actually is disclosing, a return to buying on the part of Brazilian tire importers and dealers, their 1920 surplus having been, for the most part, disposed of in 1921. The situation is not unusually encouraging, however, due to the present Brazilian tariff regulations granting a substantial rebate on tires made of Brazilian rubber. American companies generally, adhering to their characteristic principles of standardization and volume production, find it vastly inconvenient to make a small portion of their tires of Brazilian rubber, while their enormous main production requires the more adequate supplies which are to be had from the Far East.

European firms, with smaller and more flexible outputs, and with the tradition of custom-built products made specially for given markets more thoroughly ingrained in their makeup, have actually availed themselves of Brazil's rebate provision. Therefore, these firms have what is akin to a definite industrial advantage over American companies in competing for the Brazilian business.

Whether American volume production and the resulting economies will enable the United States to set aside this advantage, or whether it will follow suit and make tires specially for the Brazilian market, is still an unsettled question. At any rate, the Brazilian market is important enough, near enough, and friendly enough to the United States to warrant American companies doing everything in their power to retain their past position of dominance.

Crude Rubber Importations into U. S., August, 1922

Figures compiled and distributed by The Rubber Association of America, Inc., 250 West 57th Street, New York City
(Estimated net weights—long tons.)

PLANTATIONS

From	Tons
Batavia	1,137
Belawan-Deli	1,878
Cochin	11
Colombo	1,969
Japan and others	16
London	1,189
Malacca	1,424
Penang	1,136
Pt. Swettenham	560
Rotterdam	719
Singapore	9,258
Sourabaya	1,165
	20,462

AFRICANS

From	Tons
Antwerp	100
Liverpool	19
	119

CENTRALS AND GUAYULE

Centrals (Mexico and Central America)	8
Guayule (Mexico)	—
	8

PARAS

Iquitos	56
Manoas	458
Para	661
	1,175

GUMS, WASTE RUBBER, ETC., IMPORTED FROM VARIOUS SOURCES

	Tons
Waste	77
Balata	33
Miscellaneous Gums	640

COMPARISON 1921 — 1922

	Aug.-1921	Aug.-1922	Total Importations 8 months ending, Aug. 31. 1921	1922
Plantations	13,031	20,462	95,493	169,026
Paras	899	1,175	7,996	6,859
Africans	41	119	757	1,031
Central	3	8	71	48
Guayule	—	—	58	281
Manicoba and Matto Grosso	—	—	3	122
	13,974	21,764	104,378	177,367

ARRIVALS OF PLANTATIONS BY PORTS

Atlantic Ports			
Boston	500		
New York	19,671		
		20,171	
Pacific Ports			
Los Angeles	283		
Tocoma	8		
		291	
			20,462

Devulcanization of Rubber

French Patent No. 525,912 is concerned with a process of regenerating rubber by the removal of the sulphur contained therein. The rubber is mixed with a coloidal emulsion which is capable of absorbing the sulphur. Such materials as coal tar and wood tar are very well suited for this purpose. Similarly, rosin, resins of various kinds, balsams, gums and pitch also possess this property. The reaction is promoted by the presence of a solvent of sulphur. The sulphur is in a state of very fine dispersion and in this condition it is very susceptible of reacting easily with caustic soda. When suitable lyes are chosen, it is possible to devulcanize rubber mixed with textile fabrics, so as not to injure the latter in any way.

Will Arghan Replace Cotton as a Tire Fabric?

With a Breaking Strain 50 Per Cent Greater than Hemp or Flax and High Wearing Qualities, Arghan Offers Possibilities to Tire Manufacturers

NOT much has been heard in the United States of the new textile fiber Arghan which was discovered by Sir Henry Wickham, one of the pioneers of the rubber industry in Great Britain, but in the Federated Malay States, where the government has set apart 30,000 acres for its development, its value to the textile industry and possibly to tire-manufacturing has already been recognized.

According to a correspondent of the Manchester *Guardian Commercial*, Arghan is past the experimental stage, since "not only magnificent fiber but beautiful firm cloth is being made from it. No great preparation is needed, for the broad leaves, without any degumming or retting, split up into innumerable pearly white and silky fibers. Their merits are astonishing, being actually fifty per cent stronger than hemp or flax, extending to six feet or more, and adamant to sea water. Both the cloth and the yarns take dye permanently, and it is believed by textile experts that if the fiber can be produced at lower cost than similar flaxen or hemp fabrics it must rival them in use."

Arghan was originally discovered by Sir Henry Wickham in the leaves of a plant similar to the pineapple growing in the South American wilds. A quantity of the roots was transplanted in the soil of the Federated Malay States, with the encouragement from the Malay government above noted. Now the Ceylon and Indian governments, foreseeing great commercial possibilities in the fiber, are about to grant similar large tracts of land for its development.

The Arghan Company, Ltd., Winchester House, London, E. C., with capital of £100,000 in 2s. shares, is exploiting the fiber commercially. A. Montefiore is president of the company which was incorporated in November, 1919. Specimens of the fiber and of various products made from it are on display at the Malay States Information Agency, 88 Cannon street, London, E.C.4, and the Indian Trade Commission, Winchester House, Old Broad street, London, E.C.2.

Research and Tests Prove Arghan's Value

Very exhaustive research work has been carried out, and results of the greatest possible value have been obtained. H. Wilson, managing director of the Belfast Ropework Co., Ltd., reported that he had carried out exhaustive and reliable tests on samples of the fiber, and was thoroughly satisfied that it was of a very high order which should prove an asset of the greatest commercial value in the textile world. Its salt-water resisting qualities were remarkable, and its tensile strength abnormal, giving a breaking strain of more than fifty per cent over that obtained in the same class of goods manufactured from the finest Italian hemp or the best flax.

Cross and Bevan, analysts to the Federated Malay States government, reported that after full investigation they were convinced that Arghan stood out pre-eminent among innumerable fibers submitted to them during their long professional practice. The structural qualities of the strands were remarkable, and the breaking strain, determined on silk-testing machines, gave results superior to those of the staple textile fibers of all classes. The tenacity figures were quite remarkable, and established the Arghan fiber and fiber-substance as a new and exceptional type. In technical language this report acknowledged that the tensile strength of Arghan was three times that of silk, and weight for weight as strong as steel.

G. Smith, of the textile firm of Hoyle and Smith, Manchester, reported the result of joint deliberations of other important Lancashire manufacturers and spinners. The report stated that they considered there would be sufficient demand in Lancashire alone for Arghan for many purposes, such as twines, cordages, fishing-net yarns, tapes, and beltings, which would take up the production for a long time to come. They had hardly any doubt that, with an improvement in the spinning, Arghan fiber would take the place of cotton for all classes of heavy canvas woven in Lancashire, particularly where strength was the main concern. They considered that, given scope for experiments, it was within the bounds of possibility to spin Arghan fine enough to bring it within the range of Lancashire's most called-for counts. This showed its incalculable value to Lancashire, provided the price was reasonably stable and the production reasonably assured.

U. S. Sea-Island Cotton Exports Low

The boll weevil, which in recent years has increased so rapidly that only 5.4 per cent of the 1921 cotton crop of the cotton belt in the United States was produced in the uninfested area, has not left sea-island cotton untouched. Annual production of sea-island cotton in the United States during the period of 1910-1917 averaged about 92,000 running bales, but since that time the crop has been much lower—in 1918 amounting to 52,208 bales, in 1919 to 6,916, in 1920 to 1,868, and in 1921 to 3,316 bales. While the war had its effects on exports of sea-island cotton from this country, it was principally the ravages of the boll weevil, the bollworm, and other cotton pests that caused shipments to decline.

United States exports of sea-island cotton.

Years.		England.	Canada.	France.	Germany.	Other countries.	Total.
1910:							
	Bales	24,463	.....	5,021	667	50	30,201
	Pounds	9,142,243	.....	2,037,169	260,025	20,840	11,460,277
1911:							
	Bales	15,212	444	5,021	615	330	21,622
	Pounds	5,739,642	175,838	1,928,330	241,156	129,881	8,214,847
1912:							
	Bales	19,648	337	6,607	230	50	26,872
	Pounds	7,884,192	143,151	2,557,619	89,096	18,980	10,693,038
1913:							
	Bales	6,913	145	4,399	386	.....	11,843
	Pounds	2,628,437	54,797	1,600,594	128,642	.....	4,412,470
1914:							
	Bales	13,022	1,135	4,326	285	418	19,186
	Pounds	5,034,393	441,956	1,662,424	110,731	170,951	7,420,455
1915:							
	Bales	1,872	2,152	.....	624	1,510	6,158
	Pounds	717,843	854,465	.....	249,211	616,083	2,437,602
1916:							
	Bales	1,863	2,287	.....	.....	97	4,247
	Pounds	755,392	938,494	.....	.....	37,910	1,731,796
1917:							
	Bales	1,573	436	.....	.....	302	2,311
	Pounds	643,525	181,820	.....	.....	118,519	943,864
1918:							
	Bales	910	1,718	.....	.....	4	2,632
	Pounds	373,646	681,445	.....	.....	2,056	1,057,147
1919:							
	Bales	831	4,469	312	.....	440	6,052
	Pounds	315,239	1,860,079	138,572	.....	178,247	2,492,137
1920:							
	Bales	414	1,396	579	.....	.....	2,389
	Pounds	182,386	556,377	236,023	.....	.....	974,786
1921:							
	Bales	171	30	16	.....	.....	217
	Pounds	64,794	11,419	8,168	.....	.....	84,381

Prior to the Great War the United Kingdom, France, Germany, and Canada were the principal buyers of American Sea Island cotton. Beginning with 1915, however, shipments to these countries with the exception of Canada either stopped or greatly declined. But new, though small, outlets were found, especially in Europe, Italy taking 314 bales in 1915, 60 in 1916, 120 in 1917; and Netherlands and Sweden in 1915 buying 377 and 811 bales, respectively. The next year 20 bales were shipped Brazil. In 1917, 178 bales went to Spain and 200 bales in 1919, while Switzerland in the latter years took 240 bales. Short crops have of late years resulted in small exports being made, only 217 bales being sent abroad in 1921 and 230 bales up to July 31 during the current year.

Scientific Management for Rubber Manufacturers

The Control of Material Consumption

This Seventh Article of the Series, Which Began in the June 10th Issue, Will Be Recognized as One of Particular Importance

By Alfred Baruch

Consulting Industrial Engineer, New York

IN any factory large enough to require division into departments it is absolutely necessary to issue material from stores on written requisition. The chief object of this procedure is not so much to fix the responsibility for the material in case it is drawn out in excessive and wasteful quantities, although that too is important, but more to direct the movement of the material from point to point so that this progress may synchronize perfectly with the flow of orders and the preparation of equipment. In addition to the above uses of the written requisition it serves as the basis for charging material and supplies in and out of stock. By this means an accurate report is furnished of material consumption.

The Issue of Requisitions

Owing to the prevailing custom of allowing the foreman of the department or some other member of the supervisory force to fill out the requisition as the need arises, it will be necessary to make a careful study of the function of the dispatcher in order to show how much better fitted he is to do this than the foreman who is busy overseeing the activities of the workmen. The dispatcher is the connecting link between the planning department and the production force. He is in possession of the manufacturing schedule. He lays out the work of the men and individual machines. He knows when machines are going to run short of material and, furthermore, he knows what material goes to each machine.

Rubber machinery is often interchangeable. The man who is dispatching the work to the machines is in the best position to direct the delivery of material. Besides, the withdrawal of material from stores necessitates a certain amount of clerical work which should not be loaded on the foreman since it will divert him from his other duties or else cause him to neglect the task of writing out a requisition on the plea that at the particular minute when he needed it, production would have been delayed if he had stopped to fill out the written form. The foreman is usually the highest paid man in the department and to consume any of his expensive time with clerical work is false economy and endangers the accuracy of the records besides.

A further advantage of the written requisition is that it saves a good deal of time. Word of mouth orders are confusing and often give rise to disputes. A written order can never be misunderstood especially if it is properly designed so that the clerical work on it is reduced to a minimum. The written order insures the material against being dragged out indiscriminately from stock and being left about in great disorder to clutter up the aisles and impede progress generally.

In considering the form of the requisition, it is necessary to take into account the department in which it is to be used. If it is intended to withdraw material from stores a simple request describing the exact material wanted is sufficient. But if the request is for material in the process of production, it is necessary to be specific even as to the location of the material and its age. Consequently, it may be necessary to use several forms in the various departments. Another variation will arise out of the difference in the method of storage. Where bins or floors are used the bin or floor number must identify the particular lot of material wanted. If trucks or skids are used a truck or skid number may be utilized for identification or else the lot itself may be numbered. Thus the character of the storage facilities governs the form needed. The means used for storage depends in turn on the material stored so that the same departments usually take practically the same kind of requisition.

The Form of the Requisition

In the case of material withdrawn from stores, the requisition must be headed "Material Requisition." It must show the date the requisition is written and the order number, if a system of production orders is used. This matter was taken up in the article on "Planning." Stock production in a rubber factory may be based either on production orders or on a manufacturing schedule. In case of the former the order number issued by the planning department must appear on the requisition. If the manufacturing schedule is used a standing order number or else a symbol number of the material required can be employed. The necessity for accurate identification of the material consumed with the products that require it will be discussed fully in the chapter on costs.

The body of the requisition should show the quantity, unit, size, and description of the material needed. Where production orders are used or where the manufacturing is done on a jobbing basis it is often convenient to put the price at which the material was bought on this requisition, since it is the initial one. In the case of jobbing orders it is absolutely necessary unless standard costs are used. But the modern tendency is to use actual costs wherever possible and this affords a good opportunity to do so since the purchase price appears on the stock records kept in the storeroom.

If the price is not put on the requisition, when the time comes to determine the cost of some job or of some special lot of tires or tubes that have gone through, it will be necessary

HIGH LIGHTS OF THIS ARTICLE

The value of the written requisition lies not only in fixing responsibility for material drawn out but in directing the movement of material from point to point in the factory. Written orders save time, confusion, and disputes.

The function of the move order is described.

Storage space between the mill room and the compound room serves as an expansion joint, enabling the compound room to catch up with the mills and providing for drying and aging the rubber.

The system of storing, handling, and using batched stock is described in detail. A quadruplicate move order is employed.

Fabric control and the method of getting fabric to the calenders are explained.

How material control works in the tube department.

to charge all the material used on the lot at the prevailing market rate or else at an average rate since it is obviously impossible to trace back the prices of the various items. Thus actual cost can be charged only by putting the price on at the time the material is issued from stores.

It is not necessary to extend the full amount of the cost at the time the material is issued. The price alone can be entered in the column provided for the purpose and the amount can be extended later by the cost clerks. Pricing the initial requisition furnishes the material cost. The additional cost is incurred by the labor operations necessary to turn out the products wanted. The accompanying illustration indicates the form a stores requisition should take.

Move Orders

The requisitions for work in process serve a somewhat different purpose than the stores requisitions. In fact, they are

PARTIAL COMPLETE — **MATERIAL REQUISITION** — DATE _____ ORDER NO. _____

QUANTITY	UNIT	DESCRIPTION	SIZE	PRICE	AMOUNT

ISSUED BY _____ FOREMAN'S O K _____

FIG. 1—THE STORES REQUISITION, USED ONLY TO DRAW UPON THE INITIAL STORES

not strictly speaking requisitions. They are really move orders taking the partly finished material from a temporary stockroom to the machines. The method by which a record of what is available is made depends on the nature of the material at this stage of manufacture. For example, where it is necessary to use hot stock as in the case of some tubes a card inventory will not be satisfactory, since the individual rolls must be accounted for separately and used in their proper rotation. Therefore, I propose to take up the various manufacturing steps in the making of tires and tubes and show how the control of material may be accomplished.

The method of withdrawing material from stores has already been described. A regular form is used, indicating the rubber or fabric wanted. As these requisitions are based on production orders or schedules the transfer of rubber from the storeroom to the compound room is accomplished without further trouble. The compound room should really operate as a unit. That is, once the material comes in, it should move in a continuous process until the compounding is completed and then pass on to the milling department without the use of a requisition or written order of any sort.

The Mill Room

If the plant is of any size it will be necessary to have a small storage space between the mill room and the compound room to provide for the possible contingency of the latter's failing to make enough raw batches of each kind to keep all the mills going at full speed. In that case the storage space would act as an expansion joint permitting the compound room to catch up. Another reason for the provision of storage space between the compound and the mill rooms is that some of the rubber must be aged or dried before it is milled.

Since no move order is used it is necessary to provide some agency that will get the material from the storage space to the mill in time to prevent any hold-up. This task may be delegated to the truckers or it may be made the work of a floor dispatcher. The latter is preferable because he is usually a higher grade of worker and can be depended on. He must keep all the mills supplied with material as much of the time as they are scheduled to run. If there is to be any interruption of activity the order to stop must come from the chief dispatcher.

In a small plant it will pay to schedule the work of the mills so as to get the various kinds of rubber milled in the proper sequence. Here move orders can be issued against the manufacturing schedule or else a departmental schedule can be made out which will cover the work of all the mills.

Batch Storage

From the mill room the batches must again go into storage. At this point the storing of material is necessarily a more complicated problem since the batched stock may go to calenders, to tubing machines, or to molds. The stock that goes to the calenders is in turn subdivided according to the kind of calendered product required. That, and the fact that it is necessary to get the right kind of stock to the calender which needs it without having to hire highly paid truckers, makes the actual system of controlling the movement of material at this point sound much more complicated than it really is in practice. The following is a description of such a system and it is developed from actual experiments with the problem of controlling production at this point with a minimum of effort:

It is assumed that the batched stock is stored on trucks, although of course skids or even bins may be used. Where the quantity stored is so small in proportion to the size of the

BATCHED STOCK MOVE ORDER

Serial No......

Compound No......

Truck No......

Date Milled.....

Date of Del. To Stock.....

Stock Room No......

Location.....

Gross Weight.....

Tare Weight.....

Net Weight.....

Date	ASSIGNED			Balance	Time
	Ord'r No.	Cal. Dr. Dpt.	Lbs.		

Weighers No......**Truckers No.**.....

Rec'd By.....**Str. Rm.**.....**Shift**.....

Ordered Out By.....**Shift**.....

FIG. 2—THE COMBINATION OF MOVE ORDER, REQUISITION, AND IDENTIFICATION TAG

factory building that actual space is not a consideration the question is one of efficiency in handling more than anything else. Due to an available supply of cheap labor it may be found more economical to store the batches in bins than to leave them standing on the skids or trucks. This involves double handling since the batches have to be lifted from the

trucks to the bins and vice versa. Besides, the bins would have to be built with grooves to hold the trays on which the batches are placed. This would practically necessitate steel bins, which means a very heavy investment in storeroom facilities. If such expenditures had to be made at every point in the process of production where material must be stored the outlay for storage facilities would be exhorbitant. The trucks are generally more satisfactory from the point of view of both efficiency and expense. They take up more room but they save double handling since the batches put on the truck by the millman remain there until they are taken off by the calender crew. They are easier to control, too, since in the bins the oldest stock nearly always drops to the bottom and is permitted to stay there until it has to be scrapped out.

To resume the discussion of the method of controlling material through the calender: The empty truck is weighed before it is sent to the mills. The weigher attaches a pin tag which shows the tare weight of the truck and its number. When the truck has been loaded by the millman it is taken back to the scales to be weighed. Every truck that goes into stores must have an identification and move card made out for it. This move order had best be made in quadruplicate. The first three copies are made of bond paper and the last is made of bristol board. The backs of the first three copies may be carbonized or the weigher may use carbon paper. Of course the carbonized forms are time-savers but they are also much more expensive and quite messy.

The weigher fills in the information required on the order. This will vary with the plant and therefore the accompanying drawing of a move order is inserted only for the purposes of illustration. It calls for the stock number, the date the batches were milled, the gross weight, tare weight, and net weight. After he has made out this form the weigher detaches the cardboard copy and attaches it to the truck by means of a wire run through a gimlet in the card. This card now serves to identify the truck as long as this particular lot of batches is on it. The weigher releases the truck, giving the other copies to the trucker. An added precaution may be taken by having the weigher fill in the trucker's number. But it is not a good idea to load this man too heavily with clerical work because the scales might become a congestion point.

The truck is delivered to the stock room designated to hold this special kind of stock. The man in charge assigns the truck to a definite location which he indicates on all copies of the move order. Then he signs the move order on the line provided for that purpose. He returns the signed duplicate to the trucker. This signed copy of the move order becomes the basis for the trucker's pay.

The stock man files the third copy of the move order in his own file which gives a complete record of the stock on hand without making him do the clerical work of keeping stockrecords. As it is necessary to take precautions against any of the stock getting too old the stock man files the move orders in chronological sequence so that the oldest orders may always be on top. He sends the original copy of the move order to the dispatcher's office by means of messenger or any other communication system in use. This move order is filed in this office in the identical manner in which the stockman's move orders were filed.

Batches Drawn from Stock

The method of issuing production orders to various departments was described in another chapter. When the production order comes to the calender dispatcher he at once consults his files to see that he has the material required. Those orders that do not have to go through the calender process are released at once for delivery if the material is available. Theoretically, the various orders have been so co-ordinated by the planning department that the material is always available or the orders would not have been sent in the first place. But as rubber may bloom out, or have something else equally as disconcerting happen between the time the order is issued and the time of delivery, this cannot be laid down as a hard and fast rule. If the dispatcher finds that he has the material in stock he releases the order. If he has not he hurries to get the material as fast as possible.

It is here that schedules go wrong. The dispatcher is called on to decide whether an order that he has just received is so important that it is necessary to interrupt the milling of some other kind of stock to fill this order at once. Ordinarily, this should not be permitted. But it is necessary to give the dispatcher considerable leeway in this respect and judge by the results he produces. Changes in schedule make for departmental inefficiency. But it is possible to make the rule in this respect so rigid that it will actually hinder production rather than help it.

In case the dispatcher finds that he has batches in stock he removes the order from the file and sends it or gives it to the first trucker available who can tell from the information already on the order where the truck is to be found. The only additional information required is the destination of the truck. This is indicated on the order by the dispatcher.

It will be noted that the order calls for a truck load of batched stock. In case the production order requires more material than is contained in one truck load the dispatcher must take care to provide the calender on which this stock is run with another truckload when the first is exhausted. If the department is very large and he cannot take in the work of all the machines personally he must make up a table of the probable time it will take each machine to use up the stock at hand. This table he can use as a guide for ordering out other trucks. If the production order requires less than a truck load the dispatcher still orders out a full truck. The calender uses as much of the material as is needed and then what is left is returned to stock after having been properly weighed and a new tag and move order made out for it. The weigher writes in the date the stock was milled and thus insures the move order's being filed in such sequence that it

REPORT OF SCRAP

DATE _____ SERIAL NO. _____

WEIGHT	DESCRIPTION	SCRAP VALUE PRICE	AMOUNT

MATERIAL CREDIT _____ REPORT BY _____

FIG. 3—SCRAP TICKET USED TO REPORT ANY MATERIAL THAT MUST BE TAKEN OUT OF STOCK AND SCRAPPED BECAUSE IT IS EITHER TOO OLD OR DEFECTIVE

will be the first to be called out when it is needed. Of course, it may happen that there is a partially filled truck already in the stockroom which contains enough material to fill the needs of the small production order. In that case the dispatcher would naturally order it out.

The trucker takes the order to stock room designated and proceeds to get the truck out. It is advisable to have the stock man supervise this procedure because the trucker in his haste may take the wrong truck or, at least, one containing material that was more recently milled than the stock on the truck called for by the order. If the stock room is enclosed it is an easy matter for the stock man to prevent the wrong truck from going out. But if it is an open stock room he may have a little more difficulty and other measures will have to be taken.

The trucker takes the truck released to him by the stock man to the calender or department indicated on the move order. Here the man in charge checks over the order to see that the right truck has been delivered to him and then signs the trucker's copy of the move order, thus accepting responsibility for the truck. This signed move order becomes the basis for the trucker's pay.

Summary

A summary of the above will help to make it clear. The control of the movement of material in this department de-

pends on a quadruplicate move order. This order is made out by the weigher. The original is used in the dispatcher's office as a perpetual inventory of the stock available in the stock room. The duplicate copy is used as the basis for the pay of the trucker who takes the truck from the mill to the stock room. The triplicate copy is used as a perpetual inventory of the stock on hand by the stockkeeper himself. The fourth or cardboard copy is used as an identification tag that is attached to the truck itself. When the dispatcher wishes to order a truck out of stock he pulls a move order from his file and gives the order to a trucker. The latter gets the truck out of stock and delivers it to its destination. Then he files the original move order as evidence of work that he has done and for which he must be paid. If it is desred to double-check the whole procedure the cardboard tag can be removed from the truck when the latter is emptied of its contents and sent into the dispatcher's, where it can be compared with the stockkeeper's copy to see that the truck has actually been removed from stock. But usually such refinement is not necessary because the stockkeeper and the dispatcher between them can keep all the older stock cleaned up.

Fabric Control

The procedure for getting fabric to the calenders is just about the same except that not so many copies of the move order are required. The fabric is ordered out of the storeroom direct upon the storeroom requisition. From here it usually goes to a heated room where it must be dried of most of its moisture content. As this fact creates the need for a small accumulation of fabric rolls in the drying room, it is necessary to identify the rolls in some manner and to order them out to the calenders as they are needed. Here the problem of aging does not exist and it does not therefore make any difference which particular roll gets to the calender as long as the roll contains the right sort of fabric.

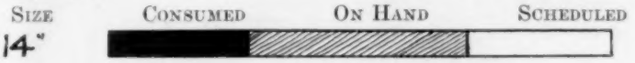
Thus the identification tag for the fabric rolls may be a simply perforated card which shows the kind of fabric contained in the roll or it may be an elaborate move order telling just what compound the fabric is to be used with and the calender to which it must be delivered. In case the latter system is used some difficulty arises over getting the truckers to take the rolls to the calenders in their proper rotation. If the stock is ordered to the calender according to a definite schedule and the fabric does not come to the machine according to the same schedule the trouble that will arise is obvious. For this reason I am inclined to think that a direct order from the dispatcher to the trucker telling what kinds of fabric to get and to what calenders to deliver them will serve the purpose much better. In that case the record of fabric available in the dispatcher's office might consist of a duplicate copy of the stores requisition or else of report of an actual physical count of the rolls available.

Continuous Process Stock

The above considers the material as being too bulky to be carried on regular inventory cards and therefore individual records are provided for each unit or piece as the truck or the fabric roll. There are two other methods of keeping record of and controlling material in process. One is a reproduction of the regular stores record system described in the preceding article. The other is the use of graphics where a ratio must be kept up constantly between the work to be done and the quantity of material on hand. This is the situation where the consumption of certain kinds of stock is almost a continuous process and therefore absolute accuracy as to the quantity on hand is not nearly so important as the maintenance of this ratio.

The tube department furnishes a good example. In the making of laminated tubes the same width and gage of sheet may be used on several sizes of tubes. Here it is necessary to keep enough stock on hand to meet the demand made by the empty mandrels, the latter being regulated according to the production schedule. By making a graphic chart of the number of rolls of sheeted stock of each width available and then covering these lines with another color to show the consumption of the rolls as indicated by the reports of tubes rolled or cured, it is possible to show the quantity of sheet stock on hand as the difference between the line first drawn and the part covered up. When the line gets shorter than it is safe to permit as indicated by past experience the dispatcher immediately orders up more stock or else switches production to stock that is on hand.

The accompanying illustration shows how the graphic stock record may be used to advantage. The solid black represents the consumed material. The shaded portion is the stock available.



Proposed British Rubber-Goods Exhibition

(By Alfred Nutting, Clerk in the U. S. Consulate General, London)

The June issue of the bulletin of the Rubber Growers' Association of London states that efforts are being made to organize a rubber exhibition, to be held at Olympia, London, in April, 1923. The bulletin says:

"The main idea of this exhibition is to educate the public as to the multitudinous uses to which rubber can be applied for economic and domestic purposes, and thus to stimulate the demand for rubber manufactures of every kind among the entire public, both industrial and individual. The exhibition will, therefore, consist chiefly of a display by manufacturers of all the best and most up-to-date applications of rubber for every purpose to which the commodity lends itself, and will thus prove an education to many people not hitherto familiar with all its uses, or the economic and other advantages it enjoys over other materials for a vast number of purposes in everyday life.

The organizer is F. W. Bridges, who was the organizing manager of the shipping, engineering, and machinery exhibition held at Olympia in 1919. His address is 36 Whitefriars Street, London, E. C. 4.

Plastic Composition Resembling Natural Asphalt

In British Patent No. 1,818,092 there is described a plastic composition which bears a strong resemblance toward natural asphalt in properties and uses. This composition is made by melting together 18 kilograms of india rubber and 12 kilograms of resin, adding 600 grams of naphtha, benzene, oil of turpentine, or other solvent of both rubber and resin, and incorporating with the product 100 kilograms of finely powdered coloring matter, such as oxide of iron, marble, stone, brick or ochre.

Rubber Bathing Suit, Stockings, Belt, and Shoes. No, the Ball is not Rubber! It is Snow

Rubber Statistics from 1922 Questionnaire - First Half

Covering the First Six Months of 1922

The Rubber Association of America, Inc., 250 West 57th Street, New York

(Copyright, 1922, by The Rubber Association of America, Inc.)

Number of rubber manufacturers reporting data 219
Number of crude rubber importers and dealers reporting data 53
Number of reclaimers (solely) reporting data 6

Total Daily Average Number of Employes (On Basis of Third Week of January, 1922) 133,281

	Reported by Mfrs. who also reclaim (24)	Reported by Reclaimers solely (6)	Total
No. of Pounds Reclaimed Rubber Produced from Raw and Cured Scrap	23,501,915	34,343,765	57,845,680
No. of Pounds Scrap Rubber (including Raw and Cured Scrap) Consumed in Production of Reclaimed Rubber	30,768,329	47,125,625	77,893,954

Number of Pounds of Crude Rubber Consumed in the Manufacture of Rubber Products and Total Sales Value of Shipments of Manufactured Rubber Products

Product	Number of Pounds of Crude Rubber Used	Total Sales Value of Shipments of Manufactured Rubber Products
Tires and Tire Sundries:		
Automobile and motor truck pneumatic casings	150,086,346	$192,890,053
Automobile and motor truck pneumatic tubes	37,630,043	25,660,091
Motorcycle tires (casings and tubes)	496,423	786,744
Bicycle tires (single tubes, casings and tubes)	984,876	1,769,331
All other pneumatic casings and tubes, not elsewhere specified	1,163,048	1,773,147
Solid tires for motor vehicles	16,668,395	11,132,417
All other solid tires	487,334	572,814
Tire sundries and repair materials	2,501,992	4,874,061
TOTAL—Tires and Tire Sundries	210,018,457	$239,458,658
Other Rubber Products:		
Mechanical rubber goods	15,799,724	32,361,089
Boots and shoes	12,457,112	39,392,773
Insulated wire and insulating compounds	2,144,790	7,305,200
Druggist sundries, medical and surgical rubber goods	2,793,061	5,805,434
Waterproof cloth, clothing, and rubber sheeting	2,255,253	6,293,430
Hard rubber goods	2,122,174	3,155,510
Heels and soles	6,699,675	9,119,552
Miscellaneous, not included in any of above items	2,468,481	5,198,786
TOTAL—Other Rubber Products	46,740,270	108,631,774
GRAND TOTAL — ALL PRODUCTS	256,758,727	$348,090,432

Inventory of Crude Rubber in the United States and Afloat for U. S. Ports, June 30, 1922

ON HAND	Long Tons Plantation	Para	All Other	AFLOAT	Long Tons Plantation	Para	All Other
Manufacturers	55,050	3,969	1,051	Manufacturers	8,246	161	12
Importers and Dealers	20,476	1,289	275	Importers and Dealers	24,513	284	50
Total	75,526	5,258	1,326	Total	32,759	445	62
Grand Total—On Hand, 82,110				Grand Total—Afloat, 33,266			

Analysis of Above Statistics

Commenting on these statistics, the Rubber Association through A. L. Viles, general manager, says:

"We have received a number of inquiries from members respecting the extent to which the figures contained in the report recently distributed by this office entitled Statistics Compiled from 1922 Quesionnaire-First Half are representative of the entire industry, principally from the standpoint of the amount of crude rubber used during the first six months of 1922 and the inventory of crude rubber in the United States as of June 30, 1922.

"We believe that the reported crude rubber consumption of 256,758,727 lb. (114,624 long tons) represents between 80 per cent and 85 per cent of the total consumption in the United States during the first six months of 1922. This estimate, which is a consevative one, is based on comparison with Government reports covering the year 1919, at which time the figures compiled by this office, were exactly 84.9 per cent of the government figures covering the entire industry, and on comparison with our reports for 1919.

"We believe that the reported crude rubber inventory figure of 82,110 long tons as of June 30, 1922, is representative of 95 per cent of the total amount of rubber in the United States on that date. This estimate is predicated on the fact that all of the rubber manufacturers who generally carry a good supply and practically all of the crude rubber importers and dealers have reported their figures. The 5 per cent balance is believed to be held by manufacturers or dealers who did not contribute to the report.

"We believe the association report of importations of 130,358 long tons of crude rubber during the first six months of the year may be accepted as 100 per cent complete."

Activities of Swedish Rubber Goods Trust

(By Assistant U. S. Trade Commissioner H. Sorensen, Copenhagen)

The Swedish Trust Commission has just issued a report on the activities of the Swedish Rubber Manufacturers Trust. The results obtained by the trust are said to be phenomenal.

Before the trust was formed, a very sharp competition existed between the four Swedish companies who now compose it (Aktiebolaget Helsingborgs Gummifabrik, Svenska Gummifabriks Aktiebolaget, Ryska Gummifabrik Aktiebolaget, and Skandinaviska Gummi Aktiebolaget), but already prior to the World War the domestic market was entirely controlled by them. After the disappearance of the Russian goods during the war the monopoly of the Swedish trust was even more firmly established. The four members have agreed to quote the same prices and allow the same discounts and terms of payment, and the production has been divided among them according to a fixed ratio. The retail price of the rubber goods is also controlled by the cartel.

The share capital of the four factories in 1914 amounted to 4,000,000 crowns; by 1920 this had increased to 14.320,000 crowns, of which sum only 390,000 crowns represented new subscriptions of capital, whereas 9,840,000 crowns represented free shares.

The net profits of the cartel during the decade, 1911-1920, reached a total of 35,000,000 crowns. The years of 1915, 1916, and 1919, especially, showed considerable profits, amounting to 62, 70, and 77 per cent, respectively, of the share capital. For the year 1920 the shareholders received a dividend averaging 26 per cent on the total share capital, free shares included.

Imports and Exports of Rubbers

During 1914, the retail price for a pair of rubbers was 3 crowns and during 1921 8 crowns 50 ore. The imports and exports of rubbers in recent years are as follows:

Years.	Imports. Kilos.	Imports. Crowns.	Exports. Kilos.	Exports. Crowns.
1913	114,002	552,910	622,415	2,240,694
1914	95,043	439,652	602,931	1,937,354
1919	132,757	1,103,585	69,713	811,641
1920	101,371	(1)	99,131	(1)
1921	84,079	(1)	286,387	(1)

[1] Not available

The majority of the imports came from the United States, while the exports went principally to Denmark and Norway.

A new method of coagulating rubber latex is described in the *Gummi Zeitung*, volume 35, pages 659 to 660. The particles of rubber in the rubber latex are charged with negative electricity. When an electric current is passed through the latex, the rubber particles are collected at the anode, while the milky sap at the cathode clear up. Porous vessels filled with carbon are used as the electrodes. A 110 volt current produces quick coagulation.

NEWS OF THE INDUSTRY

The New Tariff Schedule

Comparison between McCumber-Fordney and Underwood Laws Shows Increased Duties on Many Items Used by Rubber Manufacturers

INCREASED duties on most of the chemical items that interest the rubber manufacturer and a general increase in import charges on all lines of manufactured rubber goods, except tires, over the Underwood law of 1913 are revealed in the new McCumber-Fordney tariff act which was signed by President Harding on September 21 and became a law on midnight on that date. Tire duties continue at the ten per cent rate of the Underwood act.

Rubber toys and toy balloons are protected by a duty of 70 per cent which is an increase from 35 per cent. Belting is increased from 15 per cent to 30 per cent and insulating materials from 10 per cent to 30 per cent. Tire fabrics, including cord fabric, remains the same at 25 per cent.

Long staple cotton, on which there was a duty of 7 cents per pound under the emergency tariff, was placed on the free list. This was a great victory for the Rubber Association of America. F. C. Van Cleef, secretary of the B. F. Goodrich Co., and Ernest Hopkinson, vice president of the United States Rubber Co., with Charles Neave, general counsel of the Rubber Association made the fight before the Senate Finance committee when it was proposed to increase the duty to 15 cents per pound. In the brief filed with the committee it was stated that cotton fabric constitutes the largest single element in the cost of manufacture of the tire, being in excess not only of the cost of rubber but also that of labor.

All ad valorem rates in the tariff bill are based on foreign valuation and under the flexible tariff clause the President may, at his discretion, impose an American valuation if he deems that this further protection is necessary beyond the provisions of the foreign valuation basis.

The following are the more important items in the new tariff law of interest to the rubber manufacturer and comparison is made with the rates under the Underwood tariff.

Cotton, 1⅜ inch or more—free (7c per pound in the emergency tariff). Other cotton, free.

Tire fabric, including cord fabric, 25 per cent ad valorem (the same under the Underwood Act).

Tubings, garters, suspenders, braces and *cords* composed of cotton and rubber 35 per cent ad valorem. (25 per cent in the Underwood Act). The same composed of silk and rubber, 55 per cent ad valorem (45 per cent under the Underwood Act).

Golf balls, tennis balls, footballs, base balls and rubber balls, 30 per cent ad valorem.

Rubber toys and *toy balloons,* 70 per cent ad valorem (35 per cent under the Underwood Act).

Belting for machinery made of cotton fabric and rubber 30 per cent ad valorem (15 per cent under the Underwood Act).

Tires—automobile, motorcycle and bicycle, 10 per cent ad valorem (the same as under the Underwood Act).

Insulators and insulating materials, wholly or partly of rubber and gutta-percha, 30 per cent ad valorem (10 per cent under the Underwood Act).

Vulcanized hard rubber goods, 35 per cent ad valorem (25 per cent under the Underwood Act).

Manufacturers of rubber or gutta percha not specially provided for, 25 per cent ad valorem.

Waterproof cloth, composed of cotton or other vegetable fiber and rubber, 5 cents per square yard and 30 per cent ad valorem (25 per cent under the Underwood Act).

Crude rubber, gutta percha, jelutong or *pontianak, guayule, gutta balata, gutta siak, scrap rubber and scrap gutta percha*—free.

CHEMICALS

	McCumber-Fordney Act	Underwood Act
Acetic Acid, not over 65 per cent (lb.)	¾c	free
Acetic Acid over 65 per cent (lb.)	2c	free
Acetic anyhdrid (lb.)	2c	2½c
Acetone (per cent)	25 %	1c lb.
Alcohols		
Methyl (gal.)	12c	free
Ethyl (gal.)	15c	$2.60
Aluminum bronze	14c	25 %
Ammonium carbonate (lb.)	1½c	¾c
Barium Carbonate (lb.)	1c	15 %
Barytes, crude (ton)	$4	15 %
Barytes, ground (ton)	$7.50	20 %
Blue Pigments (lb.)	8c	20 %
Blanc fixe (lb.)	1c	20 %
Black pigments (lb.)	20 %	15 %
Bone black (lb.)	20	free
Carbon tetrachloride (lb.)	2½	1c
Castor oil	3c lb.	12 gal.
Caustic soda (lb.)	½c	¼
Chalk, precipitated (lb.)	25 %	1/10c lb.
Clay, China, (ton)	$2.50	$1.25
Chrome colors (lb.)	25 %	20 %
Cobalt Oxide (lb.)	20c	10c
Cottonseed Oil (lb.) (emergency tariff 2c a gallon)	3c	free
Coal tar intermediates (lb.) 40 per cent after 2 years	7c+55 %	5 to 10 %
Formaldehyde solution (lb.)	2c	1c
Fuller's earth (unmanufactured) ton	$3.25	75c
Gas black	20 %	15 %
Glycerine, crude (lb.)	1c	1c
Glycerine, refined (lb.)	2c	2c
Hexamethylenetramine (lb.)	25 %	15 %
Iron oxide (lb.)	20 %	10 %
Lead, red, (lb.)	2¾c	25 %
Lead, white, (lb.)	2½c	25 %
Linseed oil	3 3/10c lb.	10c gal.
Litharge (lb.)	2½c	25 %
Lithopone (lb.)	1¾c	15 %
Magnesium, calcined (lb.)	3½c	3½c
Magnesia, carbonate	1½c	1½c
Mica, powdered	20 %	15 %
Ochers, siennas, umbers (crude) (lb.)	⅛c	5 %
Ochers, siennas, umbers (ground) (lb.)	⅜c	5 %
Orange Mineral (lb.)	3c	25 %
Paris White	25 %	1/10c
Peanut oil (lb.) (emergency tariff, 26c a gallon)	4c lb.	6c gal.
Prussian Blue (lb.)	6c	¼c
Pyrogalic acid (lb.)	12c	12c
Rapeseed oil (gal.)	6c	6c
Silica (ton)	$4	free
Soda ash (lb.)	¼c	free
Soya bean oil (lb.) (emergency tariff, 20c a galloon)	2½c	free
Talc, soapstone (lb.)	1c	15 %
Ultramarine blue (lb.)	3c	15 %
Venetian red (per cent)		10 %
Vermillion reds, with quicksilver (lb.)	28c	15 %
Whiting (lb.)	25 %	1/10c
Zinc Oxides, dry (lb.)	1¾c	10 %

I. C. C. Scrap Rubber Ruling

The Interstate Commerce Commission recently ruled that the fifth class rating was properly applied to carloads of "scrap rubber tires mounted on steel rims" instead of the rate for scrap iron. The commission stated that the ultimate use or worthlessness of the rubber included in the shipment could not be given consideration. Scrap iron dealers, therefore, are advised to have the rubber removed from the rims before shipment if they wish to avoid paying the higher freight rate.

Converse Sells Bond Issue

The Converse Rubber Shoe Co., Malden, Mass., has sold an issue of $1,000,000 fifteen year 7½ per cent sinking fund gold bonds through a Chicago banking house. It was oversubscribed. The bonds, offered at par, were issued to anticipate the maturity of serial notes due this and next year, to reduce bank loans, and to augment the working capital of the company. Unfilled orders on hand will require the operation of the plant at full capacity for the remainder of the year.

September Meeting Mid-West Association

The regular monthly meeting and luncheon of the Mid-West Rubber Manufacturers' Association was held on September 12, at the Hotel Morrison, Chicago. In the absence of President W. W. Wuchter, Vice President Thomas Fallen of the Lion Tire & Rubber Co., LaFayette, Ind., presided.

Most of the comment on the tire situation was to the effect that the large amount of tires being dumped on the market at a low price, together with price cuts, is harming the tire trade. One member declared that several of the smaller manufacturers are now selling tires at a loss; he also deplored the policy of a number of tire firms in using cheap fabrics in their tires or otherwise weakening the construction in order to produce tires at a low price. Another member predicted that the small manufacturer would gradually get on a cash basis and would also figure his costs on poundage methods in order to get accurate results.

Following the luncheon the principal speaker, C. D. Hardy, stated that business men should feel gratified that the readjustment in industry, commerce, and agricultural is now being made and that the prices of manufactured and farm products are gradually being brought to their proper basis.

J. M. Baskin of the New York *Daily News Record* stated that what was an ill-wind for one of the textile trades was blowing some good to another; in other words, clothing manufacturers and retailers, he said, have stated that the remarkable growth in popularity of automobiles and motoring have made American men less particular about their dress and more disposed to spend money on the upkeep and purchase of automobiles.

Considerable discussion was had regarding future meetings. Some of those present seemed to feel that meetings should be held in other cities with the idea of stimulating a greater interest in the activity of the association. It was suggested that the November meeting be held in St. Louis, but no definite action was taken. This matter will be further discussed at the October 10 meeting.

News Notes of the Rubber Association

The Specification Committee, Mechanical Rubber Goods Manufacturers Division, held its first meeting of the fall in the Rubber Association offices on September 14, and, as is usual, devoted the entire day to consideration of various questions involved in the detail of specifications for mechanical rubber goods. Substantial progress was made in reconciling differences of opinion between the users of specification goods and the manufacturers.

On September 26 the Executive Traffic Committee met at the Yale Club, New York City, and gave its attention in a preliminary way to a considerable number of traffic and transportation matters which were also discussed by the Traffic Committee as a whole on the following day at the same location. An unusually good attendance was secured and good progress on certain rate and classification matters subjects was made.

The Executive Committee, Tire Manufacturers Division, held its regular monthly meeting at the Yale Club on September 27, followed by a regular quarterly meeting of the Tire Division as a whole at the same location on the 28th. Both meetings were well attended and many subjects were discussed, prominent among which were the following: Relations with National Tire Dealers Association, Marking of Tire Sizes, Disposition of Scrap Casings, Procedure in Tire and Rim Standards Work and Spring Dating Terms.

A regular meeting of the Executive Committee, Rubber Sundries Division, was held at the Union League Club on the evening of September 12 and a very satisfactory session was had, many accumulated matters of a routine nature being disposed of.

1922 *Questionnaire—First Half*

Early in September the familiar six months questionnaire compilation was distributed and proved to be of very general interest, particularly from the standpoint of the total crude rubber consumption and the total crude rubber inventory at the end of that period. Elsewhere in this issue of THE RUBBER AGE will be found a full report of the result of this Questionnaire and the analysis by the Association.

Educational Poster Concerning Tire Abuses

The Service Managers Committee has completed its work of preparing the poster on common tire abuses which it is planned to distribute to the tire dealers all over the United States and the job is now in the hands of the printer who expects to begin deliveries within two weeks. It is expected that the poster, when displayed by the tire dealers will have a very beneficial effect in establishing permanently the Standard Tire Warranty and in having the Warranty understood and accepted by the tire consumer as fair to everyone concerned.

Foreign Language Editions of Straight Side Tire Pamphlet

The distribution of the French, Danish and Dutch editions of the pamphlet presenting the advantages of the straight side type of tire equipment was effected in September and the remaining editions will follow early in October. The English issue was printed and distributed many weeks ago.

Board of Directors' Meeting Postponed

The September regular meeting of the Board of Directors was postponed until October 4 when the board will meet at the Lotus Club, New York City, to dispose of matters which have accumulated during the summer.

RUBBER PAPER COVER ON LONDON JOURNAL

The *India-Rubber Journal* (London) issue of Sept. 16 was bound in yellowish rubber cover paper made according to the Kaye process. Commenting upon this innovation editorially The *Journal* said:

"We start this week an experiment in the use of a rubber-paper cover, which but for a slight hitch would have commenced last week, to synchronize with the publication of Frederick Kaye's lecture. The new cover paper has been specially made for us by P. Garnett and Son, Ltd., of Otley, and contains one per cent of rubber (calculated on the dry paper) employed as a toughener. The other constituents are approximately sixty per cent of wasted newspaper and the balance sulphate pulp with the usual size. The rubber was, of course, added as latex in accordance with the process, which has previously been described in our columns. Eight gallons of thirty per cent latex were employed per ton of paper made. This is equivalent to about twenty-four pounds of rubber per ton. Taking the value of the rubber at as high a figure as 1s. 6d. per pound, the extra cost of the latex addition is only 36d. per ton.

"There is no doubt that the paper has gained in value by much more than the above figure. For instance, the tensile strength, machine-way and crossway, are respectively 2.65 and 2.23 times that of our ordinary cover paper. Again, the bursting strain is 45 pounds, equal to 28 pounds per square inch for 0.1 millimeter thickness against 18.5 pound equal to 10.7 pound per square inch, for 0.1 millimeter thickness. But far and away the most striking difference is, however, in the folding index, i.e., the number of times the paper can be folded and unfolded along the same crease without breaking. This is 172 machine way and 95 crossway in the case of the rubber paper against 5 and 6 respectively for the ordinary."

Phoenix Plant Opens

The new plant of the Phoenix Rubber Co., Brockton, Mass., has opened with 75 employees to manufacture rubber cement and approximately 30,000 pairs of rubber heels daily. Later mechanical and molded rubber goods will be produced. The factory has 7,000 square feet of floor space. Charles D. Wener, president, has been in the rubber business in Brockton for eighteen years. Barnett I. Racow, treasurer, has had eighteen years' experience as a salesman in the rubber trade and has numerous friends in the business throughout the country.

Receiver to Sue Stockholders

The receiver for the Wilson Rubber Co., Des Moines, Iowa, has been authorized by the federal court to bring suit against 200 stockholders and Perry E. Canfield, who holds notes transferred to him by the company, to pay creditor's claims. These claims total $51,752.64.

Mason Refinancing Program

The Mason Tire & Rubber Co. of Kent, Ohio, has announced plans for a refinancing program which will include the issuance of $2,000,000 in first mortgage bonds, and an increase in the company's capital stock from 150,000 to 350,000 shares of no par value stock. The proposed refinancing will be submitted to stockholders for ratification Oct. 17, according to D. M. Mason, president.

The new funds, if the plan is approved, will be used to provide additional working capital to increase tire production, to finance the recent purchase by the Mason company of the plant of the Owen Tire & Rubber Co., at Bedford, and to refund $540,000 worth of outstanding 7 per cent serial notes.

In the last three years the Mason company has tripled its tire production according to notices being sent to stockholders. Business during August of this year was the largest in the company's history, sales exceeding $1,100,000. Sales for the entire fiscal year will be approximately $12,000,000 officials state. The company is producing 500 tires a day at the Owen plant and it is planned to increase production there to 1,500 tires a day. This will give the company a total output of 6,000 casings daily.

The Mason company was incorporated in 1915, and at the close of its second year had done a gross business for the twelve-month period of $1,213,859. This was increased to $2,324,144 in 1918; to $3,464,859 in 1919, and to $7,150,000 in 1920. In 1921 the company reported sales of more than $9,000,000 with net earnings for the year of $600,000.

The company's last annual statement showed cash on hand of $240,000, accounts and notes receivable of $1,071,767, inventory of $1,363,458, and plant accounts of $3,395,000. Liabilities include accounts and notes payable of $774,613; preferred stock amounting to $6,128,990; reserves of $115,882; serial notes amounting to $595,000, and minor liabilites of less than $100,000.

Goodyear to Redeem Bonds

Dillon, Read & Co., as sinking fund agent for the Goodyear Tire & Rubber Company first mortgage twenty-year 8 per cent sinking fund gold bonds, announce that notice has been received from the Union Trust Company of Cleveland, Ohio, as trustee, that it has designated by lot for redemption on November 1, 1922, $750,000 principal amount of first mortgage twenty-year 8 per cent sinking fund gold bonds. The bonds designated for redemption are payable on November 1, 1922, at the principal office of the Union Trust Company of New York, or at the principal office of the Union Trust Company, Cleveland, Ohio, upon presentation and surrender of said bonds at 120 per cent of the principal amount thereof and interest accrued to November 1, 1922, provided funds for the purpose are deposited by the company with the trustee before said date.

MAX GEISLER

Personals

Max Geisler, who formerly handled tire sales of Firestone, Fisk, Columbia and other well-known makes in the middle west, has been appointed secretary and general manager of the Gillette Rubber Sales Co., which is wholesale distributor for the Gillette Rubber Co., with offices at 2721 South Michigan avenue, Chicago.

* * *

J. Robert Smith, vice president of the Smith Chemical & Color Co., 257 Water street, New York, who is traveling through the south calling on the rubber and allied trades, reports that southern manufacturers are showing more activity than at any time previously this year.

* * *

W. Edwin Palmer, treasurer of the Seiberling Rubber Co., was elected grand junior warden at the Ohio state conclave of Knights Templar at Toledo recently.

* * *

W. C. Young, manager of the aeronautic sales department of Goodyear, has been elected to the board of governors of the Aeronautics Chamber of Commerce of America.

* * *

William Pfeiffer, treasurer and general manager of Miller Rubber Co., and his wife are making a six weeks' tour of France, Germany, England and other European countries.

* * *

Dr. Elwood B. Spear, director of research at Goodyear, recently elected vice-chairman of the American Chemical Society at its Pittsburg meeting, will address the November meeting of the Cleveland section of the society on "Colloids and Rubber."

* * *

Bruce Haynes, of the industrial relations department, United States Rubber Co., was a member of the committee of executives which investigated various employee pension plans for the National Personnel Association, a report of which will be submitted at the national convention of the association in November at Pittsburg.

Personals

William Teeuwen, of the Firestone export department, formerly this company's representative in the Dutch East Indies, is in Europe making a business survey for the Firestone home offices. He will visit the London branch and the leading trade centers.

* * *

Willard Seiberling of the Seiberling Rubber Co. represented Barberton at the conference of Ohio aviation clubs held at Cleveland under the auspices of the Cleveland Aviation Club.

* * *

C. C. Concannon is the new assistant chief of the Chemical Division, U. S. Department of Commerce. He is a graduate of Harvard and experienced in the export of chemical products to foreign markets.

* * *

Ashton W. Caney, formerly vice president and assistant general manager of the Achilles Tire & Rubber Co., Binghamton, N. Y., has resigned and returned to his former home in Batavia, N. Y., to look after his realty interests. He will remain as a director of the Achilles company.

* * *

Arthur Golden has been appointed assistant sales manager of the Advance Rubber Co., Gardner & Flushing avenues, Brooklyn, N. Y.

* * *

H. O. Nadler has joined the Barrett Co., makers of "Tarvia" and roofings, and will specialize in publicity and sales promotion with headquarters at the New York office, He was formerly advertising manager of the New York branch of Goodrich.

* * *

H. W. Sherlock has been appointed manager of the sales accounting department at the main Goodyear plant at Akron.

* * *

James F. Barnett, in charge of Firestone's crude rubber office and plantation factory at Singapore, Straits Settlement, is in Akron visiting the export department.

* * *

The superintendent of the Canadian Goodyear plant at Bowmanville recently visited Akron headquarters while on his vacation.

* * *

Harry P. Ballard, executive with the Boston Rubber Shoe Co., has been appointed fuel administrator of Melrose, Mass., by the mayor.

* * *

The following advertising men in Akron's rubber factories will give lecture courses on advertising at the Municipal University this fall: L. L. King, of Goodyear; W. C. Campbell, of Miller; David L. Brown, of Goodyear; E. D. Gibbs, of Goodrich; E. S. Babcox, of *India Rubber Review*.

Over 600 in Goodyear Classes

Responding to many requests from employees, the Goodyear Tire & Rubber Company has announced night classes for men wanting to take special work in rubber chemistry, organization and management, accounting, and other business and technical subjects.

The company has been holding regular classes for its foremen and for the 600 members of the Flying Squadron, a group of picked men who are shifted all over the factory to balance production and who have mastered all the hundreds of operations in the making of tires, tubes, belts, hose, soles, and heels, and other rubber products.

The new course known as the Owl Class course, will be open to all employees.

New Advertising Balloon

Goodyear is now manufacturing at the Akron works a new type of gas balloon for advertising purposes, which is designed to withstand weather conditions and temperature changes. Hitherto the contraction of the gas has caused the bottom of the balloon, on which the advertisement appears, to wrinkle and spoil the effect. In the new type the anchor rope passes through the center of the bag and is anchored at the top. When the gas contracts, due to lower temperature according to the altitude reached, the slackness in the bag is taken up at the top, thus avoiding the troublesome wrinkling and keeping the advertisement smooth and legible at all times. The balloons are twenty feet in diameter and contain about 41,000 cubic feet of gas.

New Elmira Jobbing Concern

Organized for the purpose of wholesaling Firestone-Apsley canvas and rubber footwear, the Elmira Shoe & Rubber Co., Elmira, N. Y., has leased the Connelly building at 258 State street in that city and took possession Oct. 1. M. Rosenfield and his son Mortimer are the owners of the new concern. Several traveling salesmen will be engaged.

Columbia Sales Plans

According to a statement issued by the Columbia Tire Corp., Portland, Ore., the company plans a tire and tube production to take care of sales amounting to $3,500,000 the first year or so. The first unit of the plant is now under construction on an eight-acre site. R. A. Wurzburg is president and Alfred A. Aya, vice president and general manager.

Zinc to be Broadcasted

Radio enthusiasts having instruments tuned to the "WJZ" broadcasting station in Newark, N. J., can soon listen to a dissertation on the usefulness of zinc. W. Homer Hendricks, general sales engineer of the New Jersey Zinc. Co., will deliver the zinc talk on Monday evening, October 23, at 8.30 o'clock.

Dayton Rubber Flourishing

The largest amount of gross sales for any month in the company's history, $400,000 for August, is reported by the Dayton Rubber Mfg. Co., Dayton, Ohio. Gross sales for the first eight months of this year, about $2,500,000, equal the entire sales for 1921. The company had a net worth of $4,000,000 on August 31. The plant is in operation twenty-four hours daily, with sufficient orders on hand to run on three shifts for another thirty days.

Gutta Percha Co. New Offices

The Gutta Percha & Rubber Mfg. Co. is now occupying its new executive offices at 350 Madison avenue, New York City. This move will enable the company to give better attention than ever to all orders. The factory and warehouse are in Brooklyn, affording exceptional shipping facilities. The central location of the new offices in the uptown hotel district makes it convenient for visiting buyers and friends of the company.

Knox Plant Resumes

The Knox Tire & Rubber Co., Mount Vernon, Ohio, recently in receivership, has resumed operations under a group of stockholders headed by F. J. Spencer, an officer of the original company. F. J. Costlin, formerly of Star Rubber, is the new manager of the business.

Ravenna Plant Starts

The Supreme Rubber Products Co. which recently purchased from the receiver of the Rayon Rubber Co. the latter's plant in Ravenna, Ohio, has remodeled it for the manufacture of toy balloons and other rubber novelties. W. H. Kerr of Cleveland is president and general manager. W. T. Brown of Akron, formerly with Miller Rubber Co. for seventeen years, is vice president and factory superintendent.

Rubber Men Heavily Insured

Executives of Akron's principal rubber factories are said to be insured in the large life insurance companies for $15,000,000. Individual policies range from $25,000 to $1,000,000. This insurance is generally taken out by the company itself, as a measure of self-protection for the loss of executive "brain power". When a company employee changes positions the policy is shifted to another.

Eagle Acquires Property

The Eagle Rubber Co., Ashland, Ohio, has acquired the large J. W. Myers residence and land in the rear of the Coble residence, adjoining the present Eagle plant, on which additional factory buildings will be erected. The Myers house will be used as general offices. The property has a frontage of 300 feet on Orange street.

Apollo Plant Brings $100,000

The Maderight Rubber Products Co. has purchased the plant of the Apollo Tire & Rubber Co., East 93rd street, Cleveland, Ohio, for a sum said to be $100,000. The plant is a three-story brick structure 132 feet by 90 feet, with additional land for expansion. The property was sold by D. E. Lowe, assignee of the Apollo company.

General Plant Humming

Tire production at the General plant in Akron is now 1500 daily and tube production 1300. About 400 men are employed, of whom 100 are on the night shift. Plans for a new addition to the plant have been drawn and construction work will soon be started.

Eclat on Three Shifts

W. H. Stillwell, president of the Eclat Rubber Co., Cuyahoga Falls, Ohio, reports that the plant is being operated on three eight hour shifts. Floor space has been doubled and new machinery added during the past six months.

Loans by Akron Concerns

The Seiberling Rubber Co., Akron is reported to have negotiated a loan of $500,000 from a Cleveland banking syndicate. Amazon Rubber Co., Akron, is unofficially reported to be negotiating for a loan of $150,000 secured by first mortgage on the plant.

Lambertville Adds Tennis Shoes

A new department to be devoted to the manufacture of tennis shoes and to employ sixty or more people will be added by the Lambertville Rubber Co., Lambertville, N. J. Lately the plant has been devoted largely to the production of rubber novelties.

New $50,000 Factory Building

The Goodyear Rubber Glove Co., Naugatuck, Conn., is having erected a new $50,000 factory building by the McNally Building Co. of Framingham, Mass., to provide for the increased business of the company.

W. T. Parker

Walter T. Parker, rubber manufacturers' agent, died on Sept. 20 at Scarlet Oaks Sanitarium, near Cincinnati, Ohio. He was prominently connected in the Millcreek Valley, and was 54 years old. A son and daughter survive him. The body was sent to Cleveland for burial.

Julius Lederer

Julius Lederer, 63 years of age, president of he Baumann Rubber Co., New Haven, Conn., died in that city on Sept. 20 after a short illness. He had been connected with this concern for about thirty-five years. A widow, four sons and a sister survive him.

MARKETS

Cottons and Fabrics

NEW YORK, October 3, 1922

PRIVATE reports on the cotton crop for the month of September are not very favorable and forecast another cut in yield which would indicate a probable crop of about 10,535,000 bales. Last year's actual yield was 7,953,641 bales, in 1920, 13,489,603 bales and 1916, the greatest of all years for cotton, 16,134,930.

There is a constantly increasing demand for the staple and in view of the large increase in the overseas movement of cotton it is interesting to note that the world's visible supply of American cotton on September 30th was 2,228,109 bales, or 1,716,518 bales less than that available on the same day last year.

Exports of cotton have shown considerable increase during the last month. There were 272,808 bales valued at $31,166,035 shipped in August which brought the total for the eight months of 1922 to 3,480,569 bales valued at $347,576,005. Exports for the eight months ended August, 1921, were 3,789,236 bales valued at $273,932,046.

The consumption of American cotton in the principal European countries has increased about 30 per cent for the twelve months ending July 31 as compared with the preceding twelve months.

Great Britain increased 34 per cent, the figures being, 2,038,000 bales compared with 1,515,477 bales in 1920-21, an increase of 522,523 bales.

France consumed 565,000 bales an increase of 108,000 bales; Italy consumed 513,000 bales, an increase of 30,000 bales. Consumption in Germany was 827,000 bales an increase of 217,000 bales over last year. Czecho-Slovakia led in the rate of increase with a gain of nearly 47 per cent, consuming 246,000 bales as compared with 167,628 bales the preceding season.

In view of these figures shown the consumption of American cotton abroad it is significant that the world's consumption of cotton during the six months ended July 31, 1922, totalled 9,743,609 bales and that the United States is now consuming close to three times as much cotton as Great Britain.

LONG STAPLE COTTON

The final settlement of the tariff question in favor of Egyptian cotton, a question which has been a disturbing factor for many months, failed to bring about the improvement that was expected. Demand from the tire industry, which had quieted down some weeks ago, continued as inactive as before the passage of the new tariff bill, which in part accounted for the unexpectedly quiet market. The following quotations were made for medium uppers, c.i.f. Boston: 25 cents for number 10; 24¾ cents for No. 12 and 24⅛ cents for No. 14. Medium sakels are quoted at 30¾ cents for No. 49; 32⅛ cents for No. 46 and 34⅛ cents for No. 42.

The absence of buying was general and the Pima market showed the worst effects of the inactivity on account of the removal of the 7 cents per pound duty on Egyptian and Peruvian cotton.

Late advices from Egypt indicate that the cotton crop in Upper Egypt is in poor condition owing to intense heat and shortage of water, but that the quantity and quality of the Lower Egyptian crop are fair.

An interesting memorandum issued by the Consulate-General in London points out that the yield per acre in Peru is much greater than in other countries. In the United States this may be taken in good years as 309 pounds per acre. In Egypt the acre yields 390 pounds and in India 370 pounds. Peru's average yield is 484 pounds per acre.

TIRE FABRICS

The tire fabric market continues in an unsettled state with the tire manufacturers on the one hand holding off on contracts for 1923 in the expectation that prices will come down before the turn of the year and the representatives of the mills on the other hand pointing out that prices are at the bottom, with a margin of profit so small, that the next move in prices must be upward.

The prices given below are only nominal; do not represent prices on actual sales but figures heard in the market.

CORD FABRICS			
Combed Sakellarides	.68	@	.72
Carded Sakellarides lb.	.66	@	.71
Combed Peeler lb.	.60	@	.64
Carded Peeler lb.	.55	@	.60
Combed Egyptian uppers lb.	.65	@	.70
Carded Egyptian uppers lb.	.58	@	.63½
SQUARE WOVEN			
17¼-ounce Egyptian uppers, combed lb.	.62	@	.67
17¼-ounce Egyptian uppers, carded lb.	.54	@	.58½
17¼-ounce Sakellarides, combed lb.	.65	@	.70
17¼-ounce Sakellarides, carded lb.	.63	@	68
17¼-ounce Peeler, combed lb.	.55	@	.60
17¼-ounce Peeler, carded lb.	.50	@	.55

SHEETINGS—The Bureau of Standards has completed an investigation of twenty-five commercial brands of sheetings. It shows the results of tests for the following properties: Weight per square yard, construction, percentage of sizing, shrinkage, breaking strength and resistance to tearing and bursting. It is understood that the Government does not intend to take up the standardization of sheeting at this time unless the manufacturers express a desire for them to do so. Copies of the report were mailed to all members of the National Association of Cotton Manufacturers listed as manufacturers of sheeting.

DUCKS—Cotton duck exports in August show an increase in both quantity and value over the same month in 1921; the figures being 896,173 square yards valued at $364,251 compared with 803,283 square yards, valued at 263,822.

BURLAPS—The market for burlap has been active with prices firm. Reports from Calcutta indicate that that market was firm also. A strong market continuing into next year is looked for as it is not expected that the crop will yield nearly the world's requirements, which are estimated to be about 8,000,000 bales of jute. One importer estimates the yield as below 5,000,000 bales.

SHEETINGS			
40-inch 2.50-yard yd.	.14½	@	—
40-inch 2.85-yard yd.	.12¼	@	.12½
40-inch 3.15-yard yd.	.13½	@	—
40-inch 3.60-yard yd.	.11¾	@	.12
40-inch 3.75-yard yd.	.10¼	@	—
40-inch 4.25-yard yd.	.09¼	@	—
DUCKS			
Belting lb.	.37	@	.38
Hose lb.	.37	@	.38
Enameling lb.	.40	@	.43
Shoe Ducks lb.	.49	@	.51
Single filling lb.	.18	@	.19
Double Filling lb.	.20	@	.21½
BURLAPS (Carload Lots)			
8 -ounce 40-inch ...100 yds.	6.80	@	7.00
7½-ounce 40-inch	6.80	@	6.90
10 -ounce 40-inch	9.00	@	9.15
10½-ounce 40-inch	9.15	@	9.25
DRILLS			
37-inch 3.25-yard yd.	.12	@	—
37-inch 2.75-yard yd.	.13¾	@	—
37-inch 3.00-yard yd.	.13	@	—
37-inch 3.50-yard yd.	.11½	@	—
37-inch 3.95-yard yd.	.10¾	@	—
OSNABURGS			
30-inch 7-ounce	.13¾	@	.14
40-inch 7-ounce	.14½	@	—

COTTON EXPORTS FROM ALEXANDRIA

Alexandria, Sept. 8, 1922.

	Receipts Alexandria Cantars	Exports in Bales to England	Continent	America	Total Exports Cantars	Stock Alexandria Cantars
This week	27,913	2,768	2,642	2,100	57,112	1,369,946
Same week 1921	35,268	10,973	5,178	2,000	138,282	1,752,288
" " 1920	19,528	450	640	—	8,209	410,834
Since 9/1/1922	32,454	2,768	2,642	2,100	57,112	—
Same time 1921	58,681	11,013	5,545	2,000	141,393	—
" " 1920	20,841	450	640	—	8,209	—

Chemicals and Compounding Ingredients

THE INDUSTRIAL CHEMICAL MARKET—NEW YORK, OCTOBER 3, 1922—The quiet trading and narrow price fluctuations that have characterized the market for industrial chemicals for many weeks gave way under the influence of the final passage of the tariff bill to more active dealings with a much wider range of advanced prices. While the better tone of the market is particularly due at the moment to the relief given American manufacturers from the undue competition with material coming from countries with lower production costs, the tendency toward a more normal market has been noticeable for some time as a result of the improved business outlook. This phase of the market showed itself when the higher price levels reached during the stress of the coal and railroad strikes were maintained and even advanced after these troubles were settled. Manufacturers express themselves as being well satisfied with the business being done.

ACCELERATORS

Organic

Aldehyde ammonia, crystals	lb.	$ .90	@ .95
Aniline oil, bulk basis,	lb.	.14	@ .17
Excellerex,	lb.	.35	@ .40
Formaldehyde-Aniline	lb.	.45	@ .50
Hexamethylene-tetramine	lb.	.72½	@ .75
Paraphenylenediamine	lb.	1.55	@ 1.57
Thiocarbanilide	lb.	.28	@ .30
Vulcocene	lb.	.35	@ —

Inorganic

Lead, dry red bbls.	lb.	.09	@ .09¼
Lead, white, basic carbonate	lb.	.07¼	@ .08
Litharge, domestic	lb.	.08½	@ .08¾
imported	lb.	.17	@ —
Lime, Superfine	lb.	.02	@ .02½
Magnesia, calcined, light,	lb.	.23	@ .24
extra light	lb.	.45	@ —
heavy	lb.	.05	@ .05½
Orange Mineral	lb.	.12½	@ .14

COLORS

Blacks

Carbon Black	lb.	.16	@ .20
Micronex	lb.	.17	@ 24
Lamp Black	lb.	.12	@ .40
Bone "	lb.	.05½	@ .07½
Drop "	lb.	.07½	@ .16
Ivory "	lb.	.15	@ .45

Blues

Prussian	lb.	.55	@ .60
Ultramarine	lb.	.10	@ .35
Cobalt	lb.	.21	@ .26

Browns

Iron oxide	lb.	.05	@ .06
Sienna, Italian,	lb.	.04¾	@ .05¾
Umber Turkey,	lb.	.05	@ .06
Vandyke, domestic		.06	@ .07

Greens

Chrome, light, c. p.	lb.	.30	@ .32
medium	lb.	.35	@ .36
dark	lb.	.36	@ .45
commercial	lb.	.12	@ —
Rubber Makers Green	lb.	3.50	@ —

Reds

Antimony, crimson	lb.	.34	@ .40
golden	lb.	.17	@ .21
red sulphuret	lb.	.20	@ .22
Indian, English, pure	lb	.11	@ .15
Para toner	cwt.	1.10	@ 1.20
Rubber makers red	lb.	3.50	@ —
purple		2.50	@ —
Toluidine toner	lb.	2.25	@ 2.50
Tuscan red	lb.	.17½	@ .35
Venetian red	lb.	.03½	@ .06
Vermillion, quicksilver, English	lb.	1.35	@ 1.45
domestic	lb.	.25	@ .30

Whites

Albalith	lb.	.06	@ .06½
Aluminum bronze	lb.	.55	@ .60
Azolith	lb.	.06	@ .06½
Lithopone, domestic (factory)	lb.	.06	@ .06½
Zinc oxide. American Horse Head Special	lb.	.07½	@ .08
XX red	lb.	.07	@ .07½
American Aso:			
ZZZ (lead free)	lb.	.07	@ .07½
ZZ (under 5 per cent leaded)	lb.	.06¼	@ .06¾
Z (8-10 per cent leaded)		.06	@ .06¼
Zinc oxide, French process, White seal	lb.	.11	@ .11¼
Green seal	lb.	.09¾	@ .10¼
Red seal	lb.	.08¾	@ .09¼

Yellows

Chrome, light, c. p.	lb.	.16	@ .17
dark	lb.	.16	@ .17
medium	lb.	.16	@ .17
Ocher, French	lb.	.03½	@ .03¾
domestic	lb.	.03¼	@ .03½
Rubber Makers' Yellow,	lb.	3.50	@ —

COMPOUNDING INGREDIENTS

Aluminum flake	ton	25.00	@30.00
hydrate	lb.	.17	@ .18
Ammonia carbonate,	lb.	.06¾	@ .08¾
Barium carbonate	ton	65.00	@70.00
Barium Dust	lb.	.04½	@ —
Barytes, southern off-color,	ton	.15	@ .17
Western, prime white,	ton	23.00	@ —
Basofor	lb.	.04¾	@ —
Blanc fixe, dry, f.o.b. works	lb.	.04¼	@ .04½
Carrara filler	lb.	.01½	@ —
Chalk, precipitated, extra light	lb.	.03½	@ .04¼
heavy	lb.	.02½	@ .03¼
Clay, China, domestic,	ton	15.00	@16.50
imported	ton	15.00	@22.00
Dixie	ton	22.00	@32.00
Blue Ridge	ton	22.00	@32.00
Fossil flour	ton	60.00	@ —
Glues, extra white	lb.	.30	@ .40
medium white	lb.	.20	@ .26
cabinet	lb.	.18	@ .30
cabinet low grade	lb.	.15	@ .18
common bone	lb.	.08½	@ .14
Graphite flake, bbls.	lb.	.06½	@ .08
amorphous	lb.	.05	@ —
Infusorial earth, powdered	ton	60.00	@ —
bolted	ton	65.00	@ —
Mica, powdered	lb.	.15	@ —
Rotton Stone (powdered)	lb.	.02½	@ .04½
Silica (gold bond)	ton	35.00	@ —
Soapstone, powdered	ton	12.00	@ —
Starch, powdered corn	cwt.	2.85	@ 2.95
Talc, domestic	ton	15.00	@18.00
French	ton	22.50	@30.00
French, high grade	ton	40.00	@45.00
Italian,	ton	44.00	@55.00
Terra Alba	ton	25.00	@27.00
Tripoli, white	ton	27.50	@30.00
Whiting, commercial	cwt.	1.00	@ 1.10
Quaker	ton	13.00	@15.00
English cliffstone	cwt.	1.70	@ 1.90
gilder's bolted	cwt.	1.15	@ 1.25
Paris white American	cwt.	1.35	@ 1.45
Wood pulp XXX	ton	30.00	@ —
" " X	ton	25.00	@ —
Zinc Oxide— 5 per cent leaded		.06¼	@ .06¾
10 per cent lead sulphate	lb.	.06	@ .06½
20 per cent lead sulphate	lb.	.06	@ .06½
35 per cent lead sulphate	lb.	.06	@ .06½

(Also see whites)

MINERAL RUBBER

Gilsonite	ton	65.00	@ —
Genasco (factory)	ton	60.00	@ —
Hard hydrocarbon	ton	32.00	@42.00
Soft hydrocarbon	ton	30.00	@35.00
Pioneer M.R.	ton	42.00	@44.00
320 M. P. hydrocarbon (c. l. factory)	ton	45.00	@50.00
300/310 M. P. hydrocarbon (c. l. factory)	ton	40.00	@43.00
Synpro, granulated, M. R. (factory)	ton	55.00	@65.00

SOFTENERS

Acids

Acetic, 28 per cent	cwt.	2.80	@ 3.05
Phenol	lb.	.18	@ .21
Cresylic, 97 p. c.	lb.	.56	@ .58
95 p. c.	lb.	.51	@ .53
Muriatic, 20 degrees	cwt.	1.10	@ 1.25
Nitric, 36 degrees	cwt.	4.75	@ 5.25
Sulphuric, 66 degrees	ton	15.00	@16.00
60 degrees, bulk	ton	9.00	@11.00
Tartaric, crystals	lb.	.30	@ —

Alkalies

Caustic soda, 76 p.c.	cwt.	3.60	@ 3.75
Soda ash, 58 p.c.	cwt.	1.95	@ 2.30

Oils

Castor, No. 3, bbls.	lb.	.12½	@ —
Corn, crude, bbls.	lb.	.09¾	@ —
refined	lb.	.11½	@ —
Chinawood, bbls.	lb.	.12¾	@ .13
Cottonseed,	lb.	.10	@ —
Glycerine, drums	lb.	.17	@ .17½
Linseed, domestic	gal.	.82	@ .83
imported	gal.	.84	@ .85
Palm, Niger		.05	@ .06
Lagos	lb.	.06	@ .07
Peanut, domestic, crude	lb.	.11	@ .12
Petrolatum, amber	lb.	.04½	@ .04¼
dark amber	lb.	.03⅝	@ .03⅞
Pine, steam distilled	gal.	.80	@ .85
Rapeseed, refined	gal.	.83	@ .84
blown	gal.	.90	@ .95
Rosin, first rectified	gal.	.39	@ —
second rectified	gal.	.41	@ —
Tar, commercial	gal.	.31½	@ —
Soya Bean		.11½	@ —
Petrolatum, standard	lb.	.05	@ .08

Resins and Pitches

Cumar resin, hard	lb.	.09	@ .14¾
soft	lb.	.09	@ .14¾
Tar Retort	bbl.	10.00	@ —
kiln burned	bbl.	12.50	@ —
Pitch, Burgundy	lb.	.04½	@ .06
coal tar	ton	.01½	@ —
pine tar		.03	@ —
Rosin, grade K	bbl.	6.90	@ —
Strained	bbl.	6.90	@ —
Shellac, fine orange	lb.	.90	@ —

Solvents

Acetone, drums	lb.	.17½	@ —
Alcohol, denatured, No. 1 bbls.	gal.	.34	@ .38
Benzol, 90 per cent	gal.	.27	@ .32
pure	gal.	.30	@ .35
Carbon bisulphide,	lb.	.06	@ .07
tetrachloride	lb.	.09½	@ .10½
Dimethylaniline	lb.	.35	@ —
Motor gasoline, steel bbls.	gal.	.25	@ —
Naptha, V. M. & P.	gal.	.24	@ —
Toluol, pure	gal.	.30	@ .35
Turpentine, spirits	gal.	1.33	@ —
wood	gal.	1.25	@ —

Waxes

Beeswax	lb.	.38	@ .42
Carnauba, No. 1	lb.	.20	@ —
Ceresin, white	lb.	.12	@ .14
Bayberry	lb.	.20	@ .24
Montan, crude	lb.	.03¾	@ .04
Ozokerite, black	lb.	.18	@ —
green	lb.	.26	@ .27
Paraffine	lb.	.02¾	@ .03
Sweet wax	lb.	.12	@ —

SUBSTITUTES

Black	lb.	.08	@ .14
White	lb.	.09	@ .16
Brown	lb.	.10	@ .15
Brown factice	lb.	.07	@ .15
White factice	lb.	.07½	@ .15

VULCANIZING INGREDIENTS

Lead, black hyposulphite (black hypo)	lb.	.25	@ .30
Sulphur chloride (jugs)	lb.	.13½	@ —
Sulphur flour	cwt.	2.60	@ 3.15
Bergenport, pure (bbls.) cwt.		2.55	@ 2.90
superfine, (bags)	cwt.	2.30	@ 2.65

Zinc Oxide—There has been a slackening in demand from tire manufacturers but in other departments the demand has kept up due particularly to the recent cut in leaded zines. Prices remain as before: French process, bags, 8¾ cents per pound; barrels, car lots, 9c; less than car lots 9¼ cents; green seal, barrels, car lots, 10 cents; white seal, barrels, car lots, 11 cents; American process, lead free, barrels car lots, 7½ cents.

Blanc Fixe—The tone of the market remains the same with a good demand and no large stocks on hand. The prevailing market price for dry was 4¼ to 4½ cents though it was reported that some material was sold as low as 4 cents.

Litharge—There was an advance in this material of ½ cent in the cask price and ¼ cent a pound in the keg quotations. New quotations follow: Casks, 9 to 9¼ cents; 100 pound kegs less than 500 pounds; 12¾ cents; 500 to 2,000 pounds, 11.47 cents; 2,000 to 10,000 pounds, 11.01 cents.

Orange Mineral—Some producers have advanced quotations ½ cent a pound while others who had previously maintained an advanced price for their material have made no change. The prevailing price for domestic is 12½ to 14 cents with imported unchanged at 13¾ cents for English, 14 cents for German and 15 cents for French.

Lithopone—Practically no business for next year's delivery is being accepted at present prices. The increased duty on this material will materially affect importations. There is also a very heavy duty on crude barytes one of the basic raw materials. Leading producers are pretty well sold up and if the active demand continues there will be a scarcity of the better grades before the end of the year. Quotations continue at 6 cents a pound in bags; 6¼ cents in barrels, car lots and 6½ cents in barrels less than car lots.

Barytes—Prime Western continues to be quoted at $23 f.o.b. point of production, package included, and it is not likely that domestic producers will take advantage of the heavy tariff on imported material to increase the price. The demand was good an improvement over the preceding period.

China Clay—The price of imported china clay was advanced $1.25 cents a ton to meet the increased duty under the new tariff. This made the new price $16.25 to $23.25 according to grade. There continues a good demand for both domestic and imported. Domestic was quoted at $15.00 to $16.50 a ton, f.o.b. point of production.

Talc—The best grades of imported talc were advanced $3.00 a ton to meet the increase in duty. There has been a good demand for talc; both domestic and imported. Domestic is quoted at $15 to $18 a ton; French, $25 to $32.50; high grade French, $43 to $48 and Italian $47 to $58.

Whiting—Commercial whiting is quoted at $1 per hundred pounds; a reduction from $1.10 with other grades showing slight reductions as follows: Gilders' bolted, $1.10; extra gilders' bolted, $1.15; American paris white, $1.25; English cliffstone, $1.50.

Palm Oil—Transactions were limited to small lots during the period and the market displayed no new features. Lagos is quoted as 7 to 7¼ cents and Niger 6 to 6¼ cents.

Caustic Soda—The domestic demand continues excellent. Standard brands for domestic consumption ruled at $3.60 to $3.75.

Soda Ash—There was good demand and the contract basis for both light and dense ash remained as before. Light ash in barrels is quoted at $1.95 to $2.30 and in bags, 100 pounds, ex store, $1.75 to $2.10.

Carbon Bisulpide—The market was steady with only routine demand and domestic makers held to the old prices of 6 to 7 cents per pound.

Carbon Tetrachloride—Trading showed little change and most of the business was in small lots at 9½ to 10½ cents per pound according to quantity.

Aniline Oil—Owing to the increased price of raw material and exceptional demand makers ask 16 cents per pound at works. There was very little to be had on spot.

Crude Rubber

NEW YORK, Oct. 3, 1922

THE New York market continues to remain firm, apparently in sympathy with the London market which is in a rather speculative mood at the present time. Standard grades of spot rubber are above 15 cents in this market and 7½d. on the other side, the high being 7⅞d. January/March delivery rose to 8½d. and April/June delivery to 8⅞d., the highest quoted in many months, equivalent to about 17½ cents in the New York market, whereas the current April/June quotation over here is 16½ cents.

The optimistic feeling of London traders is reflected to some extent on this side of the Atlantic. Zorn & Leigh-Hunt, of London, in their rubber share market report of Sept. 12, state: "The commodity is thus back at the figure to which it rose last week on the unanimous vote of the Council of the Rubber Growers' Association in support of the Stevenson scheme. The feeling in the market is that the Colonial Office is prepared to help the industry and that if a united front is shown there should be no difficulty in obtaining a temporary measure of restriction by governmental action."

One of the leading New York traders stated that the consumption of standard crude rubber by the factories is greater than was previously anticipated and as most of the plants are still operating at capacity, the immediate outlook is for continued consumption for some weeks at least. This fact, together with the speculative tendency in London and New York, is maintaining a firm undertone in both markets, and if the wish is father to the thought and the thought materializes into action some form of modified restriction or pooling may come out of the present more or less chaotic conditions.

There is little call for the better grades such as Paras, Pontianacs, and Balatas, and prices are in general about the same as at our last report.

Quotations of this date are practically as follows:

Plantations			
Ribbed Smoked Sheets	.15¼	@	—
First Latex, spot	.15¼	@	—
November/December	.15⅝	@	—
January/March	.16	@	—
April, May, June	.16½	@	—
Amber Crepe No. 1	.14⅞	@	—
" " " 2	.14½	@	—
" " " 3	.14¼	@	—
Light Clean Thin Brown Crepe	.14¾	@	—
Commercially Clean Thin Brown Crepe	.14	@	—
Specky Brown Crepe	.13½	@	—
Roll Brown Crepe, spot	.13	@	—
Paras			
Madeira Fine	.21	@	—
Acre Fine	.19⅜	@	—
Up-river Fine	.19	@	.19¼
Up-river Medium	.18	@	—
Up-river Caucho Ball (shipment)	.13¾	@	—
Up-river Coarse	.14	@	—
Islands Fine	.16¾	@	—
Islands Medium	.16	@	—
Islands Coarse	.09½	@	—
Cameta	.09½	@	—
Xingu Ball	.13	@	—
Tapajos Fine	.17½	@	.18
Pontianac			
Prime Pressed	.11¾	@	—
Plantation	.06	@	—
Bangermassin-Palembang	Nominal		
Sink Gutta Percha	.15	@	—
Prime Macassar	2.55	@	—
Balata			
Panama Block	.40¼	@	—
Surinam Sheets	.68	@	—
Columbia Block	.41½	@	—
Venezuela Block	.49	@	.51

Reclaimed Rubber

NEW YORK, Oct. 3, 1922

Practically all of the rubber reclaiming plants are still working on a thirty-five to forty per cent basis, producing only such reclaims as are actually in demand without much thought for future requirements. It appears that at present most of the reclaimed rubber is used in the manufacture of automobile tops and wire insulation with some scattered calls for other purposes. The price of new crude rubber, which remains low, deters manufacturers from using the reclaimed article except where the latter's peculiar properties actually justify it.

Quotations of this date are nominally as follows:

Standard Reclaims			
Floating	.12	@	$.13
Friction	.12	@	.13
Boots and Shoes	.09¾	@	.10¼
Boots and Shoes (washed)	.12½	@	.13½
Mechanical	.08	@	.10
Hose	.10	@	.11
Tires, truck	.09	@	.10
Tires, auto	.09	@	.10
White	.12	@	.13

Scrap Rubber

NEW YORK, Oct. 3, 1922

More inquiries have come in for boots and shoes from some of the western manufacturing plants, but outside of this the market is exceedingly quiet. The con-

dition of the crude rubber market affects sales of scrap unfavorably in much the same way as it does the reclaimed market. It was thought that there might be more of an active demand during September and October, but so far it has not materialized to any extent.

Quotations of this date (per pound in carload lots delivered, except Mixed Auto which is quoted per ton) are as follows:

Auto tire peelings	.00¾	@	—
Standard White auto	.00⅞	@	—
Mixed auto ton	9.00	@	10.00
Bicycle tires	.00¼	@	.00⅜
Clean solid truck tires	.00⅝	@	.00¾
Boots and shoes	.02¼	@	.02⅜
Arctics, trimmed	.01½	@	.01⅝
Arctics, untrimmed	.01	@	.01¼
Inner tubes, No. 1	.02⅝	@	.02¾
Inner tubes, compounded	.01⅝	@	.01¾
Inner tubes, red	.02¼	@	.02⅜
Battery jars, clean hard rubber	.00⅞	@	.01
Heels and pads	Nominal		
Black mixed	.00½	@	—
Garden Hose	.00⅜	@	—
Air brake hose	.00⅝	@	.00½
Red packing	.00⅝	@	.00⅞
White mixed rubber	.01	@	.01¼

American Rubber Patents

1,422,791 George F. Schriber, Long Beach, Calif. Metal-Sheathed Pneumatic Tire for Vehicles.

1,422,113 William McEwen, Waiuku, Auckland, New Zealand, assignor of one-half to William Cory Scott Hosking, Waiuku, Auckland, New Zealand. Pneumatic Tire.

1,422,123 William O'Connell, Cincinnati, Ohio. Two-In-One Rubber Tire.

1,422,537 Wilbur B. Burke, Cleveland, Ohio. Process of Making Tires.

1,422,068 William F. Arndt, Watertown, Wis. Pressure-Signaling Device for Tires.

1,422,495 Alfred Thiele, Magdeburg, Germany, assignor to Firm of Emmy-Thiele, Berlin, Germany. Repairing Patch for Pneumatic Tires.

1,423,399 Alix Costantino, Providence, R. I. Rubber Heel.

1,422,884 Andrew John Ostberg and Albert Kenny, Richmond, Victoria, Australia, assignors to The Standard Rubber Works Proprietary, Ltd., Melbourne, Victoria, Australia. Process of Manufacture of Sponge Rubber.

1,422,822 Albert Boecler, Malmo, Sweden, assignor to Benzine Condensation Co., Inc., a Corporation of New York. Machine for Applying Solutions of Rubber or the Like to Fabrics.

1,422,851 William R. Halfpenny, Juniata, Pa. Tire.

1,423,232 Herman Lobel, Los Angeles, Calif., assignor to Compression Tube & Tire Co., Los Angeles, Calif., a Business Trust. Tire.

1,422,899 Daniel L. Syouch, York, Pa. Tire.

1,423,074 Charles H. Braden, Los Angeles, Calif., assignor to National Airless Tire Co., Los Angeles, Calif., a corporation of Nevada. Airless Tire.

1,423,435 Charles O. Lambremont, Plaquemine, La. Combination Tire and Rim.

1,423,423 Charles F. Hicks, Romeo, Mich. Tire Liner.

1,423,277 George E. Stuart and Charles A. Stuart, Oregon City, Oregon. Pneumatic Tire.

1,423,036 Howard H. Shannon, Denver, Colo. Tire Protector.

1,422,921 Eric Bylund, Winnipeg, Manitoba, Canada. Vehicle Tire.

1,424,445 David Rees Bowen, Ansonia, and Carl Frederick Schnuck, New Haven, Conn., assignors to Farrel Foundry and Machine Co., Ansonia, Conn. Machine for Mixing or Masticating Rubber and Like Materials.

1,424,668 John O. Navone, Oakland, Calif. Process for Reclaiming Rubber.

1,424,360 George Jacobs, Detroit, Mich. Tire.

1,424,223 Christian A. Wagner, Fort Plain, New York. Tire.

1,424,199 Robert J. Humelbau, Akron, Ohio, assignor to The B. F. Goodrich Co., New York. Cement Shield for Tire Cores.

1,424,231 Emil Baumann, St. Louis, Mo. Resilient Tire.

1,424,468 David A. Garden, St. Louis, Mo. Resilient Tire.

1,424,476 Hal H. Hively, Tar River, Okla. Sectional Tire Rim.

1,424,433 Joseph M. Angeletti, New York. Tire Trimmer.

1,424,278 Walter Henry Brown, Pasadena, Calif. Low-Pressure Alarm for Pneumatic Tires.

Trade Marks Applied For

[The following are trade-mark applications pertinent to our field pending in the United States Patent Office which have been passed for publication and are in line for early registration unless opposition is filed promptly. For further information address National Trade-Marks Company, Barrister Building, Washington, D. C. or Bush Building, 130 West 42 Street, New York, trade-mark specialists. As an additional service feature to its readers this Journal gladly offers to them an advance search free of charge on any mark they may contemplate adopting or registering.]

GOLD-BOND—No. 155,871. Dryden Rubber Company, Chicago, Ill. For pneumatic automobile tires and inner tubes composed of rubber and combinations thereof.

SHAPLEIGH, within a diamond. No. 155,462. Shapleigh Hardware Company, St. Louis, Mo. For pneumatic rubber tires and tubes.

PICTURE of a tree within a tire. No. 155,237. George Spencer, Moulton & Co. Ltd., London and Westminster, London, England. For India rubber tires and inner tubes.

TELISE—No. 151,642. Franklin Simon & Co., Inc., N. Y. C. For men's, women's, boys', and girls', shoes, boots, slippers, leggins, puttees made out of leather, rubber, canvas, buckskin, or linen or compositions of similar materials.

LYNN MAID—across fancy picture of a maiden. No. 157,736. Smith Shoe Co. Inc., Lynn, Mass. For leather and fabric boots, shoes, and slippers and rubbers.

CARMOOR—No. 152,720. Franklin Simon & Co., N. Y. C. For men's and boys' furnishings, undergarments, and clothing—namely, house coats, waistcoats, bath robes, smoking robes, smoking jackets, drawers, pyjamas, dress shirts, undershirts, nightshirts, union suits, bathing suits, swimming suits, dressing gowns, sweaters, mufflers, collars, gloves, hosiery, overcoats, raincoats, dress suits, golf suits, hunting suits, riding suits, tuxedo suits, walking suits, sack suits, trousers, hats and caps, made out of textile material, and gloves, sweaters, mufflers, bathing suits, swimming suits, drawers, undershirts made out of knitted material. Men's and boys' boots, slippers, leggings, puttees, made out of leather, rubber, canvas, buckskin, or linen or composition of similar materials.

BENDEEN in white letters on black panel across face of clock within black rectangular panel. No. 155,951. Bennett & Wedeen Inc., N. Y. C. For hosiery, knitted and textile fabric under wear for men, women, and children; knit goods, namely, bathing suits and sweaters; leather, rubber, fabric and knitted gloves, dress, negligee, and work shirts; neckwear namely, shoes made from leather, rubber, fabric and composite materials.

PICTURE of a hand clasping a roll of rubber on black disc. No. 159,799. Holtite Manufacturing Co., Baltimore, Md. For rubber heels for shoes.

KEYSTONE below picture of a keystone. No. 160,040. Armstrong Cork Company, Pittsburgh and Lancaster, Pa. For rubber heels.

1,424,470 Henry R. Gilson, New Rochelle, N. Y. and George F. Fisher, Providence, R. I., assignors to Revere Rubber Co. Method and Apparatus for Manipulating Vulcanizing Devices.

1,426,949 Albert Boecler, Malmo, Sweden. Device for Recovering Rubber Solvents.

1,426,763 Maurice O'Bannon, Daytona Beach, Fla. Tire.

1,426,865 Archer I. I. Harris, Barberton, Ohio. Collapsible Tire Core.

1,426,800 Walter Percy Whitehouse, Whitstable, England. Construction of Wear-Resisting and Nonslipping surfaces, Such as Tire Covers, Stair Treads, or The Like.

1,426,897 Edward M. Moore and Owen V. Peet, Indianapolis, Ind. Tire Repair.

1,426,672 Douglas R. Radford, Los Angeles, Calif. Retread For Tires and Method of Making Them.

1,426,532 Charles W. G. Allender, Denver, Colo. Clamp for Protecting Tires.

1,424,920 Julius H. Kintzele, Abraham Manheimer, and Frederick M. Etter, St. Louis, Mo. Washer placing Machine for Rubber Heel Molds.

1,424,931 Abraham Manheimer, Frederick M. Etter, and Julius H. Kintzele, St. Louis, Mo. Washer Placing Machine for Rubber Heel Mold.

1,424,824 Orin Johnson and Clarence Neuman, Menasha, Wis. Tire.

1,424,855 John Henry Ryder, Brooklyn, New York. Tire.

1,424,787 James Todd, Pittsburgh, Pa. Rubber Tire.

New Incorporations

DELAWARE

The Congo Rubber Co., to account or dispose of any article or thing made in whole or in part of rubber and the products and by-products thereof. $1,000,000. Principal office Wilmington, Delaware. Incorporators: M. M. Lucey, L. C. Browne, L. S. Dorsey—all of Wilmington, Delaware. Agent, Colonial Charter Co., 927 Market St., Wilmington, Delaware.

Intercontinental Rubber Products Corporation, to deal in rubber. $6,040,000. Agent, The Registrar & Transfer Co., Dover, Delaware.

NEW YORK

Snap-On Heel Corp., to manufacture rubber heels. $30,000. Incorporators: G. M. Schrade, A. V. Schrade and A. F. Garbe. Attorneys, Frost, Watson and Sharp, Albany, New York.

Dragon Tire & Rubber Corp., to deal in tires and tubes. $25,000. Incorporators: A. Steiner, M. Myers and I. Bregoff. Attorney, H. London, 320 Broadway.

Ideal Waterproof Fabric Co., to manufacture rubber goods. $20,000. Incorporators: S. Forscher, L. Lillienthal, 261 Broadway; M. Klein, 29 Broadway—New York City.

Jerome Tire Co., to manufacture rubber tires and tubes. $10,000. Incorporators: D. J. Gutman, 1269 Broadway; A. A. Jacobs, 570 West 156 street; J. C. Robb, 389 Third Avenue—New York City.

L. P. Kent & Co., to act as import brokers of crude rubber. $100,000. L. P. Kent, president; B. W. Guernsey, treasurer and T. A. Clements, secretary. Principal office, 2 Rector street.

Nationwide Tire Stores Inc., to manufacture automobile tires. $10,000. Incorporators: D. C. Koupal, W. M. Watson—New York City. C. Bisgard—Brooklyn, New York.

NEW JERSEY

Weiner Tire Co.., Inc., to manufacture tires. $100,000. Incorporators: L. J. & M. Weiner, Irvington, New Jersey, W. R. Ecker and H. Silverman, West Orange, New Jersey. Principal office, 1041 Clinton avenue, Irvington, New Jersey.

Aetna Tire & Rubber Co., to manufacture tires and tubes. $2,000. Incorporators: C. J. and C. M. Downing, South Orange, New Jersey; D. R. Downing, New York City. Principal office 550 Broad street, Newark, New Jersey.

Aladdin Tire Corporation, to manufacture and sell cord tires. 2500 shares of no par value. C. A. Bates, president; F. A. Goddard, vice president; B. Greene, secretary—Rutherford, New Jersey.

OHIO

The Medina Rubber Co., to deal in tires and tubes. $25,000. Incorporators: Gilbert C. Keck, S. E. Johnson, D. R. Pelton, H. W. Witter and G. F. High. Principal office, Medina, Ohio.

The Die Sinking & Rubber Mold Co. $10,000. Incorporators: W. H. Barkwill and M. R. Barkwill.

Maderite Rubber Products Co., to manufacture tires and other rubber products. $300,000. Incorporators: R. W. John, F. H. Kelsey, W. Eberly and J. J. Sloan. Principal office, 3962 East 93rd street, Cleveland, Ohio.

Zane Tire & Supply Co., to distribute automobile tires. $10,000. Incorporators: W. H. Roberts, E. J. Downs, M. V. Mohn, E. R. Mayer and T. O. Crosson. Principal office, 36 North Fifth street, Zanesville, Ohio.

Master Tire & Rubber Co., to manufacture rubber goods. $200,000. Incorporators: C. L. Caffel, C. H. Stults, R. W. Shuen, F. Coats and H. A. Estabrook. Principal office, Dayton, Ohio.

Vul-Tex Rubber Co., to manufacture rubber goods. $300,000. Incorporators: G. W. Mers, M. Hoppers, R. Burroughs, E. Burroughs and H. Herberich. Principal office, Barberton, Ohio.

RHODE ISLAND

Davis-Jones Insulated Wire Co., to manufacture and deal in insulated wire. $80,000. D. S. Davis, president and treasurer; J. T. Jones, vice president and assistant treasurer; J. F. Murphy, secretary. Principal office, Pawtucket, Rhode Island.

WASHINGTON

Faultless Pneumatic Tire Co,, to manufacture automobile tires. $2,000,000. Principal office, Seattle, Washington. Incorporators: Roy Hesseltine, A. C. Barclay, W. A. Calder, C. R. Hesseltine and J. C. Johnson.

WISCONSIN

Zastrow Auto Service and Sales Co., to deal in tires and tubes. 500 shares, par $100. Incorporators: H. A. Zastrow, H. E. Zastrow and E. Zastrow—Milwaukee, Wisconsin. Principal office, Milwaukee, Wisconsin.